

621328 R. M. G. 1910-02

# Catalogue No. 16...

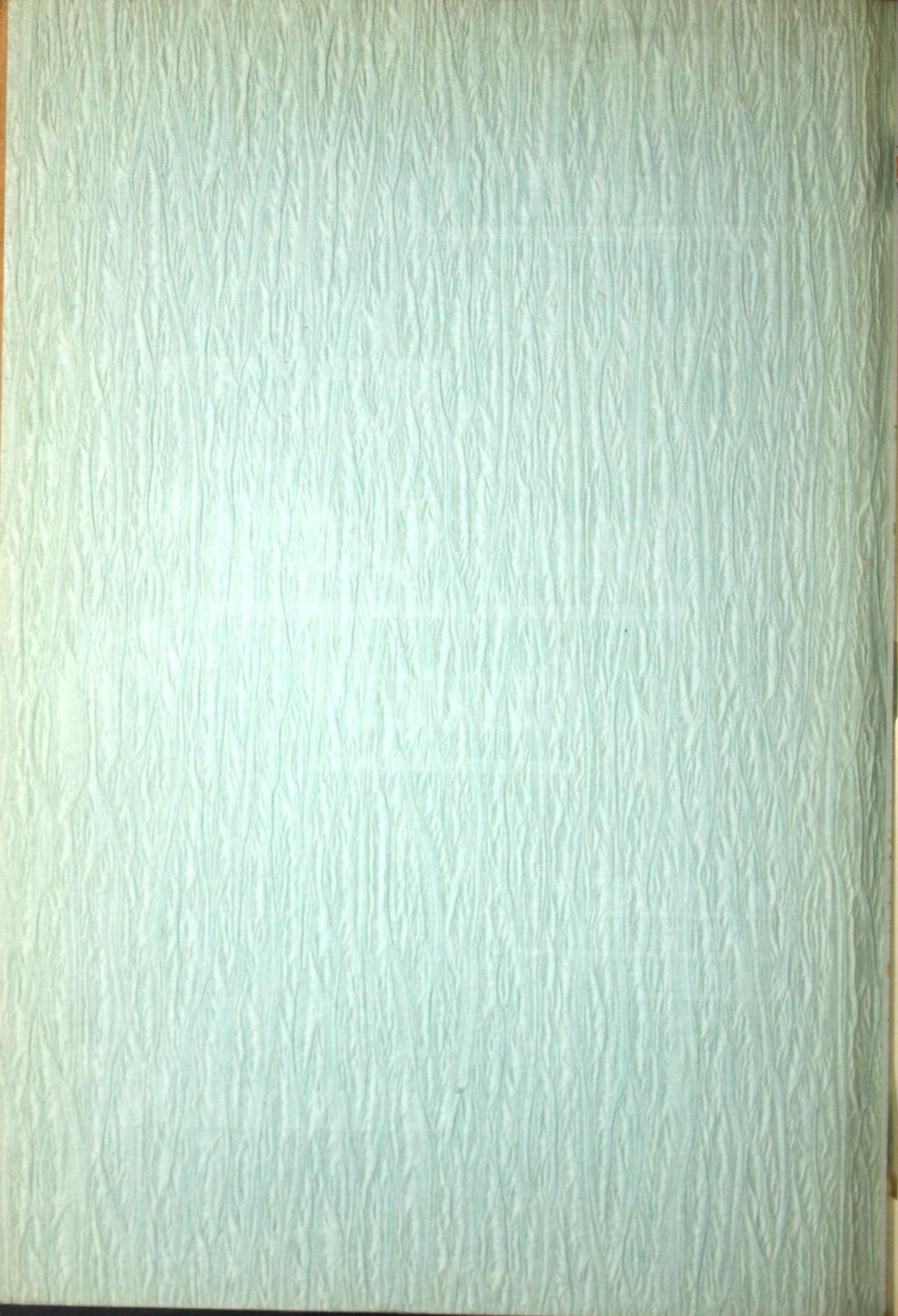
HOUSE MATERIAL

Novelty Electric

Company

50, 52, 54  
NORTH FOURTH  
STREET

...Philadelphia, Pa.



# ILLUSTRATED CATALOGUE

AND

## ... PRICE LIST ...

....OF....

Bells, Electric Gas Burners,

Batteries, Push Buttons, . . .

Speaking Tube, Telephones,

Telegraph Instruments, . . .

Etc., Etc.

.... SUPPLIES OF ALL KINDS ....

Experimental Work of Every Description Made to Order

---

ELECTRIC WORK OF ALL KINDS

INSTALLED AND REPAIRED



..... ESTIMATES FURNISHED

---

NOVELTY ELECTRIC COMPANY

50, 52 and 54 North Fourth Street

... PHILADELPHIA, PENNA.

...1899...

# To Purchasers

Goods will be sent C. O. D. by express, provided a remittance sufficient to pay express charges both ways is sent with the order.

Credit accounts unless otherwise agreed upon, are payable 30 days from date of purchase; and unless paid when due, are subject to draft at sight without notice.

Orders should be accompanied with a clear address, and by full instructions as to route of shipment where there is any preference. State whether goods are to be sent by Express or Freight.

We exercise the greatest care in packing goods and obtain receipts from Railroad and Express Companies for all goods, "forwarded in good condition." We cannot hold ourselves responsible for breakage or loss sustained in transit. If goods arrive in damaged condition, make prompt claim on the Railroad or Express Company.

It is necessary for us to have definite information regarding the financial standing of parties to whom we extend credit. To avoid delay in shipment, we therefore request that cash be remitted with the first order for goods, or satisfactory reference be furnished.

NOTE.—Prices here given are current prices of the day, and are subject to change without notice.

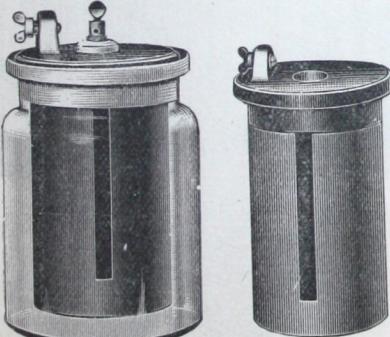
**PLEASE ORDER BY  
CATALOGUE  
.... NUMBERS**

## NOVELTY OPEN CIRCUIT BATTERIES



Novelty American Grenet Battery,  
Style A.

### Novelty Carbon Battery



Cat. No.	PRICES
509. Complete, . . . . .	\$ 35
510. Carbon Cup and Connections, . . .	20
511. Jar, . . . . .	10
512. Zinc, . . . . .	6
513. Sal-ammoniac, per lb., . . . . .	15

### Novelty Grenet, 8"

For operating induction coils, medical instruments, electrical toys, etc. Metal parts nickel plated.

Cat. No.	PRICES
500. Complete, . . . . .	\$1 50
501. Zinc, . . . . .	15
502. Carbons, each, . . . . .	10
503. Metal Ring, . . . . .	5
504. Jar, . . . . .	20

### French Grenet

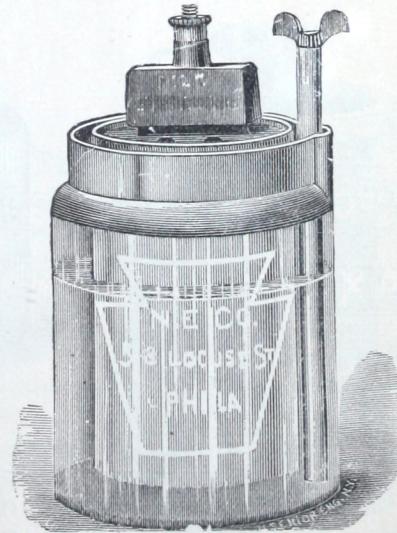
Cat. No.	PRICES
505. $\frac{1}{2}$ pt., complete, . . . . .	\$1 50
506. 1 " " . . . . .	1 85
507. 1 qt. " . . . . .	2 60
508. 2 " " . . . . .	3 35

Metal parts are of brass. Lacquered.



French Grenet Battery.

### Novelty Leclanche Battery



Cat. No.	PRICES
514. Complete, . . . . .	\$ 70
515. Porous Cup, . . . . .	50
516. Jar, . . . . .	10
517. Zinc, . . . . .	6
518. Sal Ammoniac, per lb., . . . . .	15

## The "Gonda" Cell



## The "Axo" Cell, No. 1.



## Cat. No.

	PRICES
519. Complete, . . . . .	\$1 00
520. Cover, . . . . .	10
521. Jar, . . . . .	20
522. Prism, per pair, . . . . .	50
523. Zinc, . . . . .	10
524. Carbon, . . . . .	15
525. Sal-ammoniac, . . . . .	6
526. Rubber Rings, each, . . . . .	2

## Cat. No.

	PRICES
532. Complete, . . . . .	\$1 00
533. Jar, . . . . .	20
334. Zinc, . . . . .	11
535. Porous Cup, . . . . .	65
536. Sal-ammoniac, . . . . .	6

## "Axo" Cell, No. 2



## Cat. No.

	PRICES
527. Complete . . . . .	\$1 50
528. Jar, . . . . .	40
529. Zinc, . . . . .	25
530. Porous Cup, . . . . .	1 00
531. Sal-ammoniac, . . . . .	9

## Samson Battery



No. 1

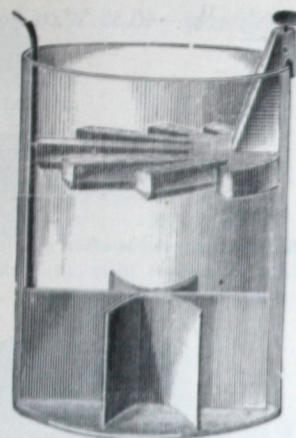


No. 2.

## Cat. No.

	PRICES			PRICES
537. Complete, . . . . .	\$1 00	544. Complete, . . . . .	\$1 25	
538. Carbon, . . . . .	65	545. Carbon, . . . . .	80	
539. Zinc, . . . . .	18	546. Regular Zinc, . . . . .	18	
540. Jar, . . . . .	15	547. Jar, . . . . .	17	
541. Cover, . . . . .	7	548. Cover, . . . . .	10	
542. Rubber to Suspend Carbon, . . . . .	5	549. Sal-ammoniac, . . . . .	6	
543. Sal-ammoniac, . . . . .	6			

**Gravity Battery**  
For Closed Circuit Work

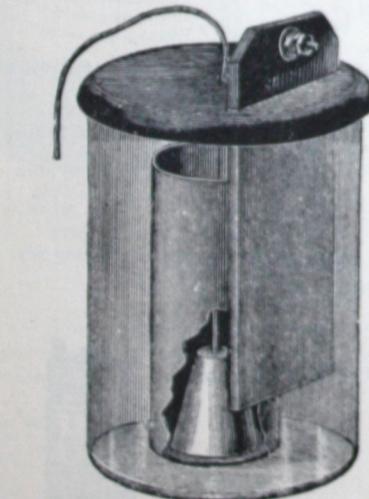
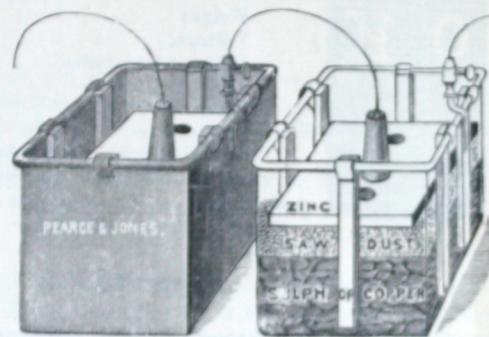


Cat. No.	PRICES
550. Size 6 x 8 complete, . . . . .	\$ 75
551. Zinc, . . . . .	35
552. Jar, . . . . .	30
553. Copper, . . . . .	12
554. Size 5 x 7 complete . . . . .	60
555. Zinc, . . . . .	25
556. Jar, . . . . .	25
557. Copper, . . . . .	11
558. Bluestone, per lb., . . . . .	10

**Eagle Metallic Battery**

**Closed Circuit**

A very desirable cell for turntable use.



**The Standard Fuller Cell**

This type of bi-chromate cell has come into general use where high E. M. F. is required, and thousands are in use throughout the country in long distance telephone service and for work of like character.

The E. M. F. of this cell is 2.1, using either bi-chromate of potash or bi-chromate of soda solution.

Cat. No.	PRICES
563. Complete, . . . . .	\$1.50
564. Jar, 6 x 8, . . . . .	30
565. Carbon, with connection . . . . .	55
566. Zinc, . . . . .	25
567. Porous Cup, . . . . .	20
568. Top, . . . . .	20

## DRY BATTERIES

## Type "B"

Capacity—discharged through 6 ohms' resistance—40.35 Watt-hours



Cat. No.		
569.	Dimensions, . . . . .	3x7
	Weight . . . . .	3 6/100 lbs.
	Voltage, . . . . .	1.55
	Internal Resistance, . . . . .	15/100 ohm
	Ampérage, . . . . .	7½ to 10
	Price, . . . . .	\$ 75

Adapted to heavy work where the discharge of current is often and long, or where a considerable ampérage is required for a short interval. *It has a higher voltage and ampérage than any other dry battery on the market.*

## Type "S"

Capacity—discharged through 7 ohms' resistance—36.06 Watt-hours

Cat. No.

570.	Dimensions, . . . . .	2x2½x6½
	Weight, . . . . .	2½ lbs.
	Voltage, . . . . .	1.55
	Internal Resistance, . . . . .	2/10 ohm
	Ampérage, . . . . .	6 to 8
	Price, . . . . .	\$ 65

Where close packing and economy of space are important factors, this type is valuable.



## Type "C"

Capacity—discharged through 8 ohms' resistance—26.17 Watt-hours

Cat. No.

571.	Dimensions, . . . . .	2½x6
	Weight, . . . . .	1.8/10 lbs.
	Voltage, . . . . .	1.5
	Internal Resistance, . . . . .	2/10 ohm
	Ampérage, . . . . .	5 to 7½
	Price, . . . . .	\$ 50

The ordinary dry cell size, although about double the capacity of any other on the market.



## Type "E"

Capacity—discharged through 10 ohms' resistance—9.47 Watt-hours

Cat. No.

572.	Dimensions, . . . . .	1¾x4
	Weight, . . . . .	12 oz.
	Voltage, . . . . .	1.5
	Internal Resistance, . . . . .	3/10 ohm
	Ampérage, . . . . .	3 to 5
	Price, . . . . .	\$ 45

Good for bell work, portable telephones, medical batteries, cataphoric boxes, bicycle bells, etc.



### Type "D"

Capacity—discharged through 12 ohms' resistance—5.93 Watt-hours

Cat. No.

573.	Dimensions, . . . . .	1½ x 4
	Weight, . . . . .	8½ oz.
	Voltage, . . . . .	1.5
	Internal Resistance, . . . . .	3/10 ohm
	Ampérage, . . . . .	2½ to 4.
	Price, . . . . .	\$ 40

Where little service is required, but where the battery must always be up in voltage and ready to give some service, and where little space is available, and light weight and portability an object, the above size is invaluable. *Will do almost any work than other sizes do*, but will not last as long.



### Mesco Dry Battery

For Call Bells, Annunciators, Burglar Alarms, Telephones, Medical Apparatus, and all open circuit work. A first class reliable battery at a low price.



### Himmer Dry Battery

Similar to the Mesco. Made in the following sizes:

Cat. No.

575.	No. 15 Cylindrical, . . . . .	7" x 3"
576.	" 5 " . . . . .	6½" x 2½"
577.	" 1 " . . . . .	4¾" x 2"
578.	" 0 " . . . . .	4½" x 1½"
579.	" 16 Rectangular, . . . . .	7" x 2¾" x 2"
580.	" 3 " . . . . .	4¾" x 2" x 2"
581.	" 00 " . . . . .	4½" x 1½" x 1½"

Cat. No.

EACH

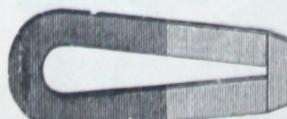
576, 577, 578.	Price, . . . . .	\$ 30
575, 579, 580, 581.	Price, . . . . .	50

(Cut half size)

Cat. No. EACH.  
574. Price, . . . . . \$ 30.

### Horseshoe Magnets

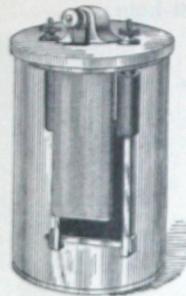
For practical or experimental purposes. Made of high-grade steel and well magnetized. Special sizes and shapes to order.



PRICE LIST

Cat. No.		Cat. No.		
582.	2 - inch, each, . . . . .	\$ 10	588. 6-inch, each, . . . . .	\$ 65
583.	2½ " . . . . .	12	589. 7 " . . . . .	75
584.	3 " . . . . .	15	590. 8 " . . . . .	1 00
585.	3½ " . . . . .	20	591. 10 " . . . . .	1 75
586.	4 " . . . . .	30	592. 12 " . . . . .	2 50
587.	5 " . . . . .	45		

## EDISON-LALANDE CELLS



## Type "J" Cell

Annunciator Model. Capacity, 50 Ampere-hours

## Cat. No.

593. Price complete, Porcelain Jars, . . . . . \$1.30

## PRICE OF RENEWAL PARTS

594. Copper Oxide Plate (capacity, 1 charge, . . . . . 12

595. Zinc Plate (capacity, 1 charge), . . . . . 8

596. Can containing 2 sticks Caustic Potash (1 charge), . . . . . 12

Size over all,  $3\frac{3}{4}$  in. x 7 in. 597. Bottle Heavy Paraffine Oil, sufficient for 1 charge, . . . . . 5

## Type "Q" Cell

Small Telegraph, Gas Engine and Motor Model.

Capacity, 150 Ampere-hours

## Cat. No.

598. Price complete, Porcelain Jars, . . . . . \$2.00

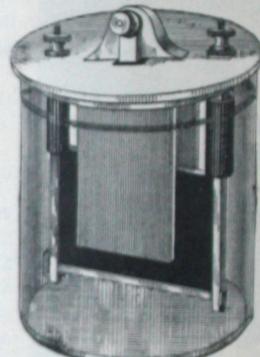
## PRICE OF RENEWAL PARTS

599. 2 Zinc Plates (capacity, 1 charge), 12c. each, . . . . . \$0.24

600. 1 Copper Oxide Plate (capacity, 1 charge), . . . . . 25

601. Can containing 2 sticks Caustic Potash (1 charge), . . . . . 17

602. Bottle Heavy Paraffine Oil, sufficient for 1 charge, . . . . . 5

Size over all,  $5\frac{3}{4}$  in. x 8 in.

## Type "X" Cell

Special Telephone Model for Local Transmitters.

Capacity, 40 Ampere-hours

## Cat. No.

603. Price complete, . . . . . \$2.50

Including Porcelain Jar.

The cell is made to fit battery box under transmitter.

## PRICE OF RENEWAL PARTS

604. 2 Copper Oxide Plate (capacity, 1 charge), 12c. each, . . \$0.24

605. 2 Zinc Plates (capacity, 1 charge), 8c. each, . . . . . 16

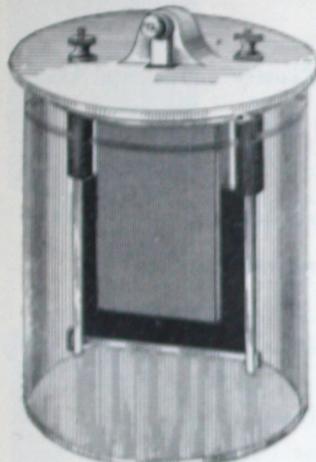
606. 2 Bottles Caustic Potash (1 charge), 10c. each, . . . . . 20

607. Bottle Heavy Paraffine Oil, sufficient for 1 charge, . . . . . 5

Size over all,  $4\frac{3}{4}$  in. x  $4\frac{3}{4}$  in. x  $7\frac{3}{4}$  in.Size over all,  $4\frac{3}{4}$  in. x  $4\frac{3}{4}$  in. x  $7\frac{3}{4}$  in.

## EDISON-LALANDE CELLS

No local action, and consequent loss of material, while the cell is idle—the chemical action in cell is less than one per cent. per month.



## Type "R" Cell

Western Union Telegraph Model. Capacity, 300  
Ampere-hours

Gas Engine and R. R. Crossing Signal Model

## Cat. No.

608. Price complete, Porcelain Jar, . . . . . \$2.70

## PRICE OF RENEWAL PARTS

609. 2 Zinc Plates (capacity, 1 charge), 21c. each, . . . . .	42
610. 1 Copper Oxide Plate (capacity, 1 charge), . . . . .	46
611. Can containing 2 sticks Caustic Potash (1 charge), . . . . .	28
612. Bottle Heavy Paraffine Oil, sufficient for 1 charge, . . . . .	5

Size over all, 6 $\frac{1}{4}$  in. x 10 in.

## Type "S" Cell

Phonograph Model. Capacity, 300 Ampere-hours.

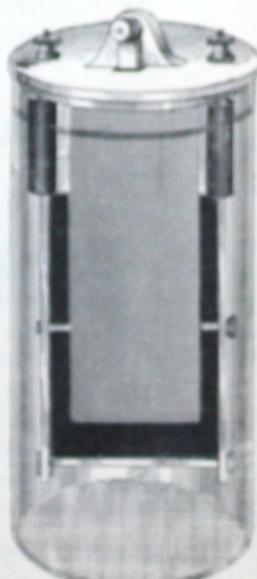
## Cat. No.

613. Price complete, Porcelain Jar, . . . . . \$2.85

## PRICE OF RENEWAL PARTS

614. 2 Zinc Plates (capacity, 1 charge), 21c. each, . . . . .	42
615. 2 Copper Oxide Plates (capacity, 1 charge), 25c. each, . . . . .	50
616. Can containing 2 sticks Caustic Potash (1 charge), . . . . .	28
617. Bottle Heavy Paraffine Oil, sufficient for 1 charge, . . . . .	5

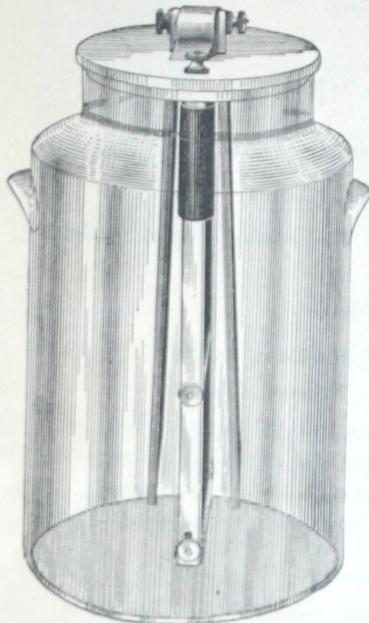
Extremely low internal resistance.



Size over all, 6 $\frac{1}{4}$  in. x 13 in.

## EDISON-LALANDE CELLS

## Type "W" Cell



Size over all, 7½ in. x 15 in.

Large Motor Model. Cautery and Dental Use.

Capacity, 600 Ampere-hours

## Cat. No.

618. Price, complete, Porcelain Jars, . . . . . \$4 85

## PRICE OF RENEWAL PARTS

619. 2 Zinc Plates (capacity, 1 charge), 38c. each,	76
620. 2 Copper Oxide Plates (capacity, 1 charge), 46c. each, . . . . .	92
621. Can containing 4 sticks Caustic Potash (1 charge), . . . . .	52
622. Bottle Heavy Paraffine Oil, sufficient for 1 charge, . . . . .	8

## General Directions for Charging

## EDISON-LALANDE BATTERIES

Where it is practicable, always make the solution in some large earthenware vessel, and allow it to get quite cold before setting up the battery. Remove any scum from the surface of the solution before pouring on the oil. Stir the solution frequently while the caustic is dissolving.

It is most important that the oxide plates should be entirely submerged in the Caustic Potash solution, so that the top edge of the oxide plate should be at least one inch below the layer of oil.

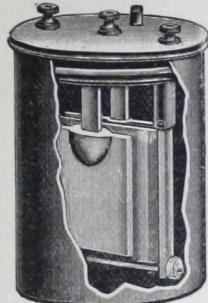
It is also of vital importance that the oil should not be omitted. When oil is not used, creeping salts form, and the life of the battery is reduced fully two-thirds.

Before immersing the plates in the solution, put them in water until they are thoroughly wet. This prevents any oil adhering to them, as they pass through. If this is not done, a film of oil covers the plates, and it is some time before they will work to their full capacity.

Complete directions for charging are sent out with every cell.

We wish to call particular attention to the fact that when the zinc is consumed, it is also necessary to renew oxide plates and solution.

## EDISON-LALANDE CELLS



Size over all,  $4\frac{1}{2}$  x  $6\frac{3}{4}$  in.  
Jar only,  $4\frac{1}{4}$  x 6 in.

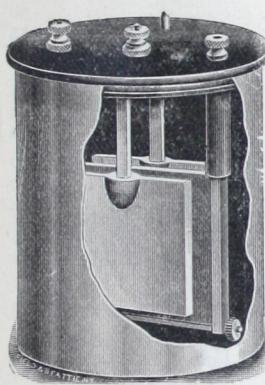
Capacity, 100 Ampere-Hours.

## Cat. No.

623. Price complete, . . . . .	\$1 75
--------------------------------	--------

## PRICE OF RENEWAL PARTS

624. 1 Copper Oxide Plate, (capacity 1 charge) . . . . .	20
625. 1 Zinc Plate, (capacity 1 charge,) . . . . .	25
626. 1 Can Caustic Potash, (capacity 1 charge,) . . . . .	15
627. Bottle Heavy Paraffine Oil, (1 charge,) . . . . .	5
For prices of permanent parts of cell see page 12.	
628. Soft Rubber Gasket Rings, each, . . . . .	15



Size over all,  $5\frac{3}{4}$  x 8 in.  
Jar only, 5 x 7 in.

Capacity, 150 Ampere-Hours.

## Type "V" Cell

## Marine and Traction Gas Engine Model

## Liquid-Tight Steel Enameled Jar

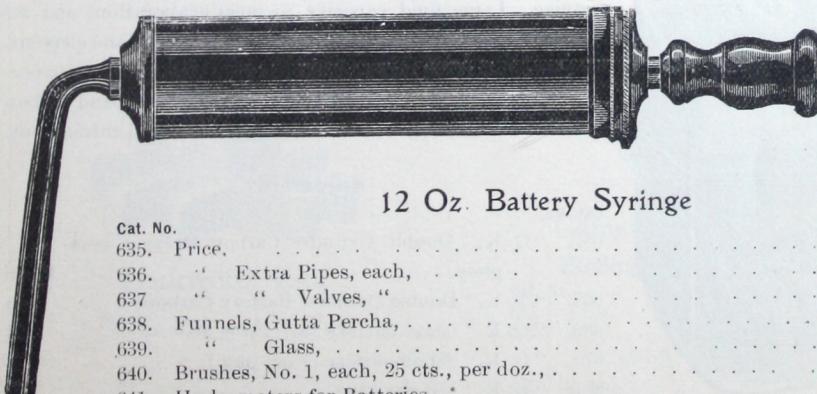
## Cat. No.

629. Price complete, . . . . .	\$2 50
--------------------------------	--------

## PRICE OF RENEWAL PARTS

630. 1 Copper Oxide Plate, (capacity 1 charge) . . . . .	25
631. 1 Zinc Plate, (capacity 1 charge) . . . . .	30
632. 1 Can Caustic Potash, (capacity 1 charge,) . . . . .	17
633. Bottle Heavy Paraffine Oil, (1 charge,) . . . . .	5
For prices of permanent parts of cell see page 12.	
634. Soft Rubber Gasket Rings, each, . . . . .	15

## BATTERY UTENSILS



## 12 Oz. Battery Syringe

## Cat. No.

635. Price, . . . . .	\$2 00
636. " Extra Pipes, each, . . . . .	40
637. " " Valves, " . . . . .	30
638. Funnels, Gutta Percha, . . . . .	50 to 1 50
639. " Glass, . . . . .	50
640. Brushes, No. 1, each, 25 cts., per doz., . . . . .	2 00
641. Hydrometers for Batteries, . . . . .	50

## Prices of Permanent Parts Edison-Lalande Cells

Cat. No.		EACH
642.	Porcelain Jars, Type "J," . . . . .	\$ 25
643.	" " " " "Q," . . . . .	40
644.	" " " " "R," . . . . .	50
645.	" " " " "Y," . . . . .	50
646.	" " " " "S," . . . . .	65
647.	" " " " "W," . . . . .	1 65
648.	Steel Enameled Jar, Type "V," . . . . .	70
649.	" " " " "Z," . . . . .	50
650.	Porcelain Covers. " " "J" and "Z," . . . . .	25
651.	" " " " "Q," "S," "V" and "W," . . . . .	35
652.	" " " " "R" and "Y," . . . . .	40
653.	Copper Frames, with Bolts, Type "J," "X" and "Z," . . . . .	30
654.	" " " " "Q" and "V," . . . . .	35
655.	" " " " "R" and "Y," . . . . .	40
656.	" " " " "S," . . . . .	45
657.	" " " " "W," . . . . .	45
658.	Bolts and Nuts only, all sizes, . . . . .	10
659.	Hard Rubber Insulators for Copper Frames, all sizes, . . . . .	5
660.	Long Brass Bolts and Nuts for Zines, all sizes, . . . . .	10
661.	Wire Connections, all sizes, . . . . .	5
662.	Flat Copper Strips, Straight and Twisted, "W," . . . . .	10
663.	Soft Rubber Gasket Rings, "V" and "Z," . . . . .	15
664.	" " Washers, for Copper Frames, per doz., . . . . .	10
665.	" " Air-vent Nipples, "V" and "Z," . . . . .	3
666.	Thumb Nuts, all sizes, . . . . .	5

## THE "O. K." SAL-AMMONIAC BATTERY

## Double Cylinder



Features, 10 to 15 amperes. Extra heavy zines. Being a good worker, it is a good feeder and requires 7 ozs. of Sal-ammoniac. Large fluid capacity to meet evaporation, and requires less attention. Cover homogeneous with the element. Double connecting lugs to prevent being crippled in transportation. Heavy glass jar with strong seat to suspend carbon above the bottom of the jar. All parts substantial throughout.

## PRICE LIST

Cat. No.		
667.	"O. K." Double Cylinder Carbon Battery, complete, . . . . .	\$1 20
668.	"O. K." Double Cylinder Battery Carbon, . . . . .	60
669.	"O. K." Glass Battery Jar, . . . . .	20
670.	"O. K." Sal-ammoniac (7 oz. pkg.), . . . . .	8
671.	"O. K." Battery Zinc, . . . . .	30

## ZINCS



## Rod ZinCs

Cat. No.	PRICES
672. Square, each, . . . . .	\$ 5
673. Round, each, . . . . .	6
674. Round with Lug Cast, . . . . .	6



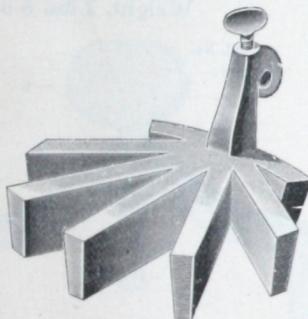
## Daniel Zinc

## With Copper Wire

Weight, 2 lbs. 3 ozs.

Cat. No.	PRICE
679, . . . . .	\$ 35

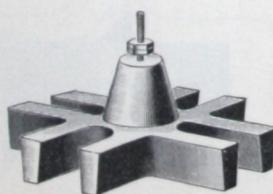
These can be furnished with threaded end if desired.



## Crowfoot Zinc

## Complete with Thumb Screw

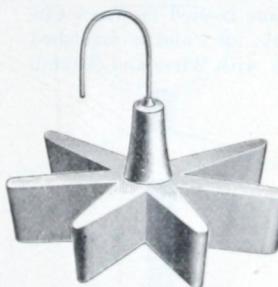
Cat. No.	PRICES
675. 5 x 7, weight, 1 lb. 12 oz., . . . . .	\$ 25
676. 6 x 8, weight, 3 lbs., . . . . .	35
677. " " 3 lbs. 4 ozs., . . . . .	40



## Lockwood Zinc

## With Pin and 2 Nuts

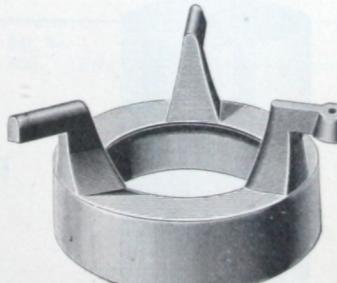
Cat. No.	PRICE
678, . . . . .	\$ 35



## Callaud Star Zinc

With Copper Wire. Weight, 2 lbs. 2 ozs.

Cat. No.	PRICE
680, . . . . .	\$ 35



## Gamewell Fire Alarm Zinc

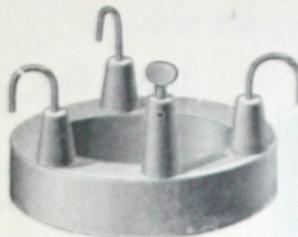
## Binding Post Extra if Wanted

Cat. No.	PRICES
681. 4 lbs., . . . . .	\$ 50
682. 3 lbs., . . . . .	40

## With Thumb Screw

683. 3 lbs., . . . . .	45
------------------------	----

## ZINCS

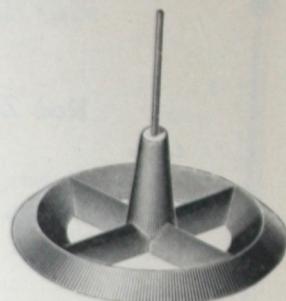


Wire Arm Fire Alarm  
Zinc

Cat. No.	PRICE
684. 3 lb.,	\$ 40
685. 4 "	50

This Zinc is used for Track Circuit Work, etc., and is furnished complete with Wires and Thumb Screws.

Only the best metal is used in the manufacture of our ZinCs.



Wheel Zinc with Copper  
Wire

Weight, 2 lbs. 6 ozs.

Cat. No.	PRICE
689.	\$ 35



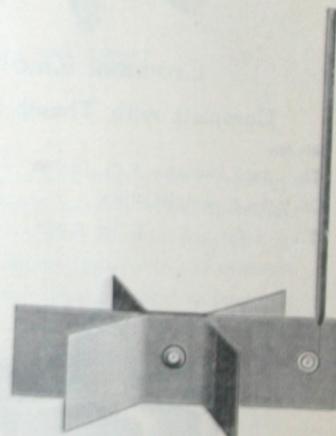
Samson Zinc with Post  
and Top Screws

Cat. No.	PRICE
687. No. 1,	\$ 18
688. No. 2,	18



Fuller Zinc with  
Copper Wire  
Weight, 1 lb. 2 oz.

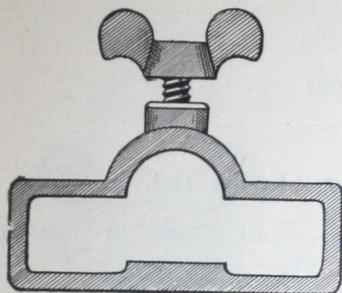
Cat. No.	PRICE
680.	\$ 25



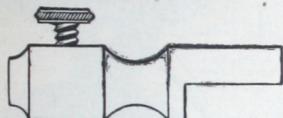
Copper for Gravity  
Battery

Cat. No.	PRICE
690. 6 x 8,	\$ 12
691. 5 x 7,	11

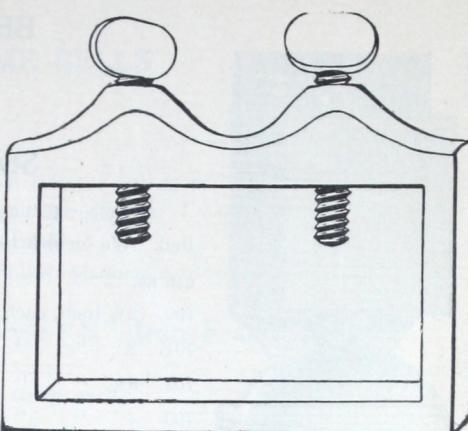
## BATTERY CLAMPS AND CONNECTORS



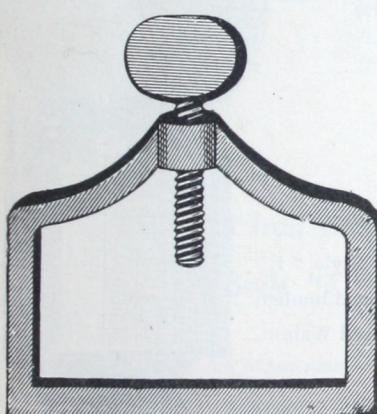
Cat. No.  
692. Carbon Clamp, price, 10 cents.



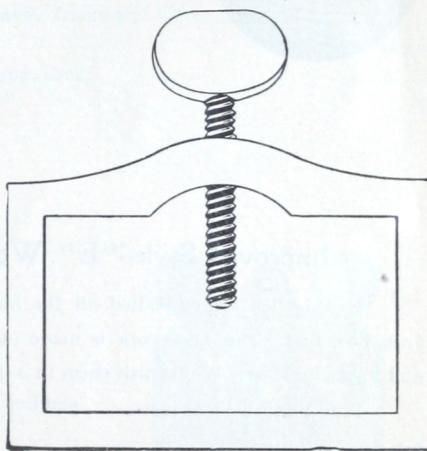
Cat. No.  
693. Carbon Connector, price, 25 cents.



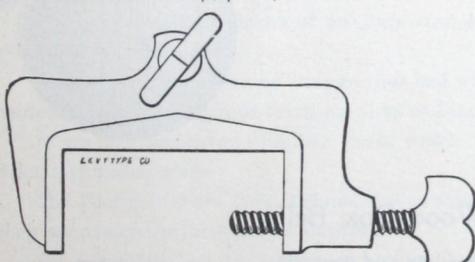
Cat. No.  
697. Carbon Clamp, price, 25 cents.



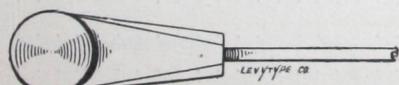
Cat. No.  
694. Carbon Clamp, price, 12 cents.



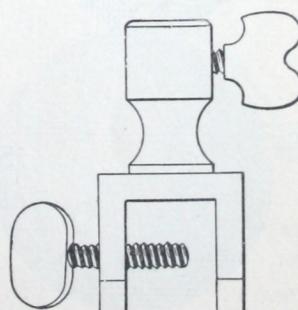
Cat. No.  
698. Carbon Clamp, price, 15 cents.



Cat. No.  
695. Carbon Clamp, price, 20 cents.

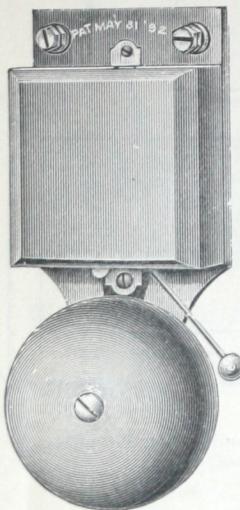


Cat. No.  
696. Carbon Connector, price, 15 cents.



Cat. No.  
699. Daniell Zinc-Clamp, price, 15 cents.

## BELLS



## Style "K" Wood Box Bell

Style "K" has all the improvements of Style "H" Iron Box Bell. We furnish these in Ash, Oak, Cherry and Walnut.

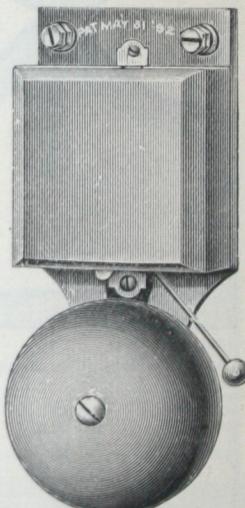
Cat. No.	PRICES
700. 2½ inch, each, . . . . .	\$ 70
701. 3 " " " . . . . .	75
702. 3½ " " " . . . . .	85
703. 4 " " " . . . . .	95
704. 5 " " " . . . . .	1 05

## Improved Style "E" Wood Box Bell

In this bell are embodied all the improvements of Style "L" Iron Box Bell. The woodwork is made out of well-seasoned lumber, and finely finished. We furnish them in Ash, Oak, Cherry and Walnut.

Pure Platinum Contacts.

Cat. No.	PRICES
705. 2½ inch gong, each, . . . . .	\$ 80
706. 3 " " " . . . . .	85

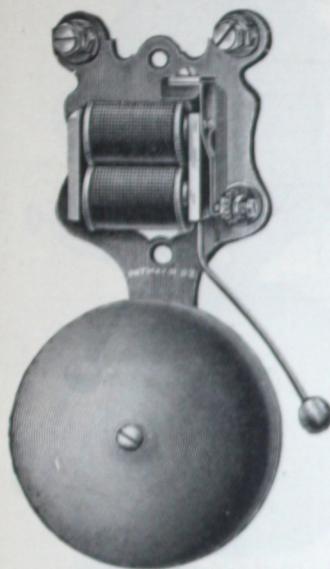


## Style "G" Wood Box Bell

(Heavier frame, larger box and magnets.)

Cat. No.	PRICES
707. 3½ inch gong, each, . . . . .	\$1 00
708. 4 " " " . . . . .	1 10
709. 5 " " " . . . . .	1 25

## IRON FRAME BELLS



A first-class straight spring skeleton bell, provided with all the improvements of Style "L" iron box bell.

All parts plated.

These bells have platinum contacts.

## Style "S" Iron Frame Bell

Cat. No.	PRICES
710. 2½ inch Gong, each, . . . . .	\$ 60
711. 3 " " " . . . . .	65

## Style "A" Iron Frame Bell

(Heavier frame and larger magnets.)

Cat. No.	PRICES
712. 3½ inch Gong, each, . . . . .	\$ 75
713. 4 " " " . . . . .	85

## Improved Iron Box Bell

## Style "L"

Below are given a few of the many advantages this bell has above others, namely :

Improved pivoted armature with double adjustment.

Can be put up with the least trouble.

Easily adjusted by means of our improved lever in whatever position it is placed.

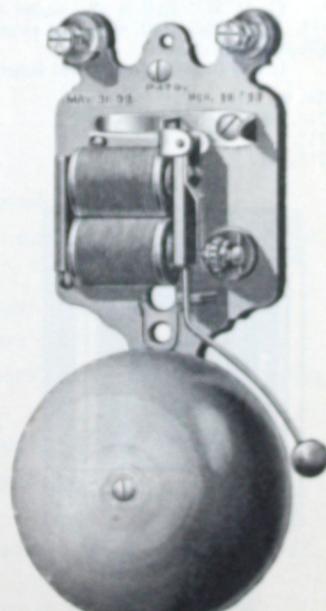
Provided with grooves on base so that bell will cover hole made in plaster and permit bringing wires to Binding Posts.

It has our improved Binding Posts which will not turn when tightening wires.

The Vital points are *Pure Platinum* and so constructed that they are always in their proper position.

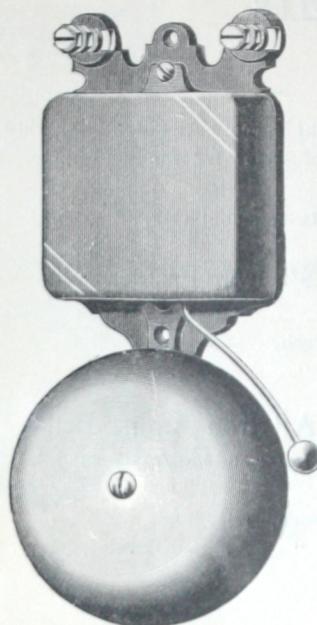
We claim this bell the cheapest because it always rings. All parts are plated.

Cat. No.	PRICES
714. 2½ inch Gong, each, . . . . .	\$ 65
715. 3 " " " . . . . .	70



Inside Appearance.

Style "M" Iron Box Bell



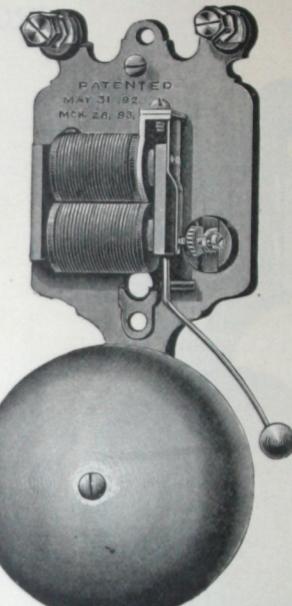
Outside Appearance.

The "M" Bell is the same style as the "L" Iron Box Bell, with the exception of the pivoted armature.

It has heavier frame and larger magnets.

Cat. No.	PRICES
716. 3½ inch, each,	\$ 80
717. 4 " "	90
718. 5 " "	1 20

Style "H" Iron Box Bell



Inside Appearance.

A new pivoted armature, double adjustment Iron Box Bell.

It has our improved non-turning Binding Posts, and the same Adjustment Posts as used on our other Bells.

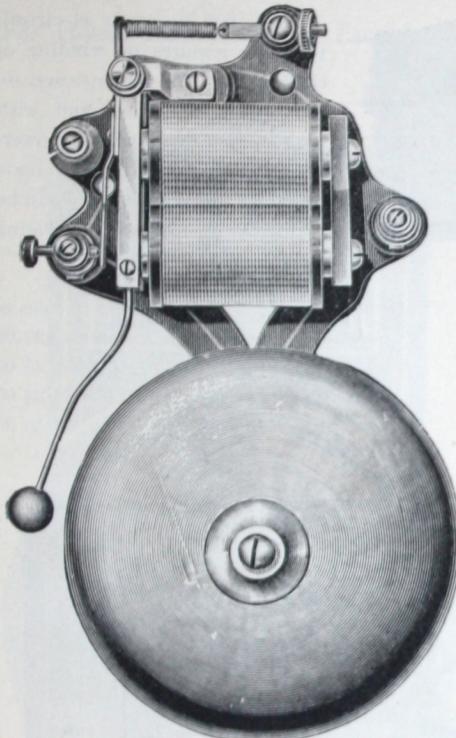
Cat. No.	PRICES
719. 3 inch, each,	\$ 60
720. 3½ " "	70
721. 4 " "	80
722. 5 " "	90



Two Point Indicating Bell

Furnished in neat, attractive polished Oak Wood Case, with Glass Front.

Cat. No.	PRICE
723. Each,	\$2 50



Style F, Pivoted Armature Iron  
Frame Bell

Cat. No.	PRICES
724. 3 inch, Gong, each, . . . . .	\$ 1 65
725. 3½ " " " . . . . .	1 90
726. 4 " " " . . . . .	2 10
727. 5 " " " . . . . .	2 75
728. 6 " " " . . . . .	3 00
729. 6 " " " . . . . .	3 50
730. 7 " " " . . . . .	4 00
731. 8 " " " . . . . .	4 50
732. 8 " " " . . . . .	5 75
733. 9 " " " . . . . .	7 50
734. 10 " " " . . . . .	8 00
735. 10 " " " . . . . .	11 00
736. 12 " " " . . . . .	12 00
737. 12 " " " . . . . .	13 50
738. 13 " " " . . . . .	19 00
739. 14 " " " . . . . .	21 00
740. 15 " " " . . . . .	23 00

These bells are the neatest in form and appearance of any electric bell made.

The frame is well japanned and beautifully striped. All the parts are heavily Nickel-plated, giving the bell a beautiful appearance.

The working parts cannot be excelled ; it is well made in every respect.

The steel pivot works in two brass adjustable screws with lock nut.

The contact and tension screws are both easy of adjustment and provided with a locking device.

Only the best **Cast Bell Metal** Nickel-plated gongs used on these bells.

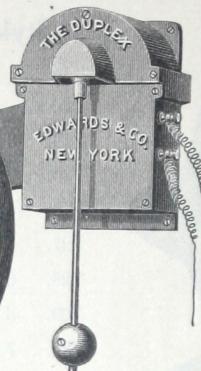
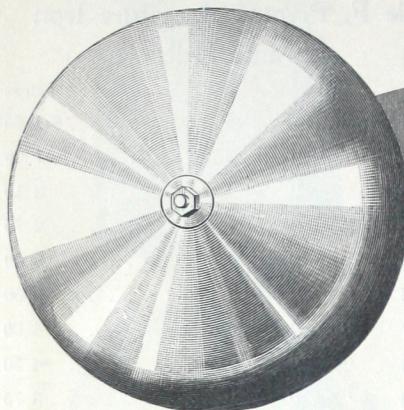
The *Vital* points are *Pure Platinum* and so constructed that they are always in their proper position.

They are especially adapted for Hotels, Fire Alarms, Railroad Signals, Public Buildings, etc., as they have a powerful blow and clear ringing tone.

For reliability they are unsurpassed.

They are furnished with improved non-turning binding and contact posts.

### The Duplex Vibrating Bell



This bell is purely electrical, therefore requires no winding of clock work. The hammer first recedes from the gong, and with accumulated force strikes a powerful blow, obtaining a full volume of sound. The vibrations can be regulated by raising or lowering the hammer rod.

Cat. No.	PRICES
741. 10 Inch, . . . . .	\$20 00
742. 12 " . . . . .	30 00
743. 14 " . . . . .	36 00
744. 18 " . . . . .	50 00

### The Vigilant Bell

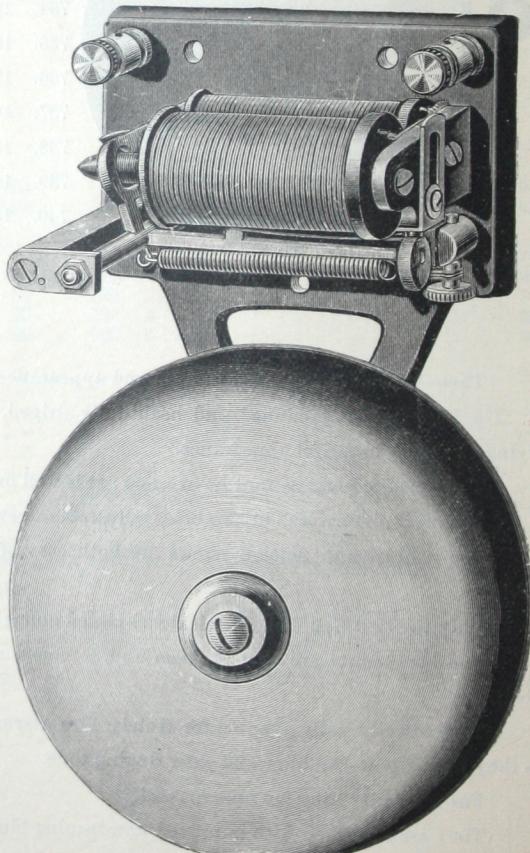
Single Stroke. Vibrating. Combination. Series.

For Railroads, Depots, Factories, Mines, Fire Alarms, etc.

The construction of this bell is such that the length of the stroke and tension is adjustable.

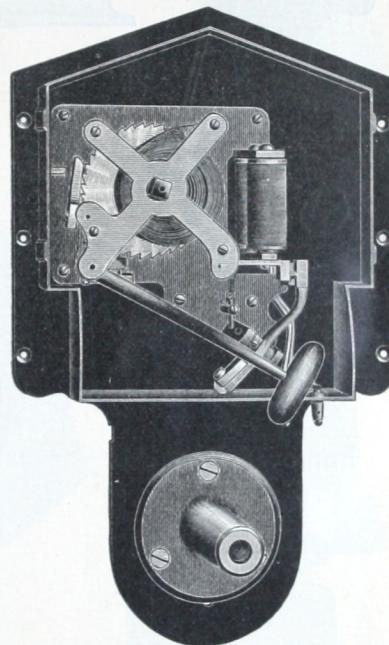
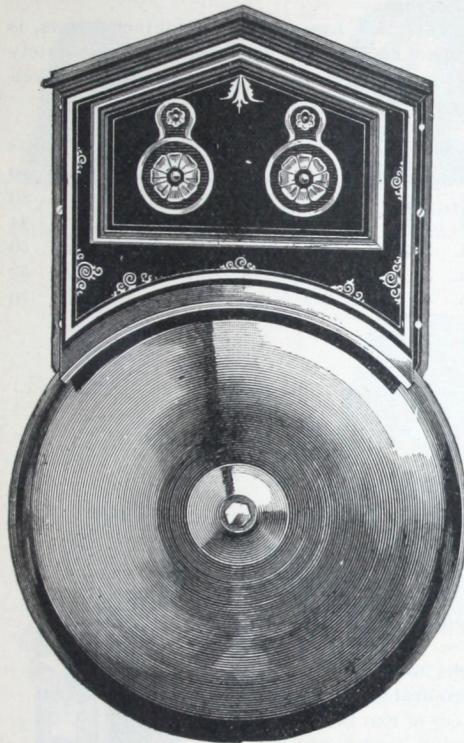
Cat. No.	PRICES
745. 3 Inch, Single Stroke, . . .	\$ 6 00
746. 4 " " " . . .	6 74
747. 5 " " " . . .	7 50
748. 6 " " " . . .	9 00
749. 8 " " " . . .	11 20
750. 10 " " " . . .	17 20
751. 12 " " " . . .	18 00
752. 14 " " " . . .	29 50

Prices upon application as a vibrating, combination or series bell.



## ELECTRO-MECHANICAL GONGS

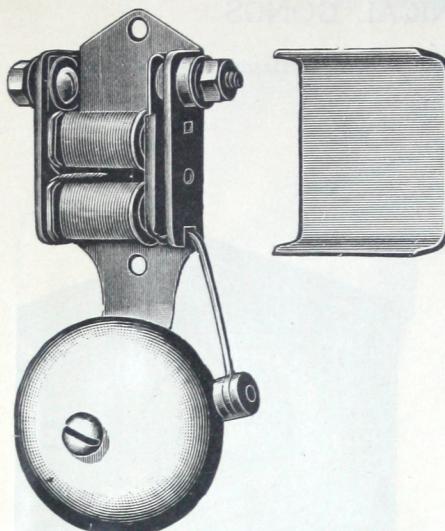
For Hotels, Mines, Schools, Factories and Fire Alarm Systems. Single Stroke or Continuous Ringers



Where a loud, sharp sound for signaling is required, these Gongs will be found invaluable. They give a powerful blow, and but little battery is required for their operation. They may be fitted with lightning arrestor, and the magnets may be made adjustable to armature when intended for fire alarm circuit.

Cat. No.		PRICES
753.	8 inch Gong, No. 1 movement, each, . . . . .	\$27 00
754.	10 " " 1 " " . . . . .	28 50
755.	12 " " 1 " " . . . . .	31 00
756.	14 " " 2 " " . . . . .	34 00
757.	15 " " 2 " " . . . . .	40 50
758.	16 " " 2 " " . . . . .	45 00
759.	18 " " 3 " " . . . . .	54 00
760.	20 " " 3 " " . . . . .	62 50

State whether Single Stroke or Continuous Ringing Gong is desired.



(Cut full size. 1 in. bell.)

### The Eco Bell

This Bell has platinized contact points, is compact and neat in appearance. Is absolutely dust-proof and furnished with metal parts nickel-plated.

Cat. No.	PRICES
761. 1 inch, . . . . .	\$ 90
762. 1 3/4 " . . . . .	80
763. 2 " . . . . .	84
764. 2 1/2 " . . . . .	50
765. 3 " . . . . .	52
766. 4 " . . . . .	70

### Improved Iron Box



Made in two styles. Style "L" corresponds in every respect to the "L" Iron Box Bell. Style "H" has the same features as the "H" Iron Box Bell.

They both have pivoted armatures and double adjustments, and are first-class in every particular.

Cat. No.	PRICES
767. Style "L" Buzzer, each, "	\$ 60
768. Style "H" Buzzer, "	50

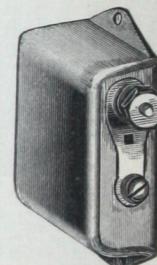
### BUZZERS

#### The Lungen Buzzer

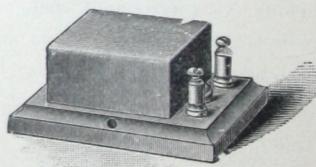
Has pivoted armature and platinized contact points.

The base and cover are made of wrought metal, nickel-plated, cover is removable, same as shown in above cut of Eco Bell.

Cat. No.	PRICES
769. No. 0, . . . . .	\$ 80
770. " 1, . . . . .	70
771. " 2, . . . . .	80
772. " 3, . . . . .	85
773. " 4, . . . . .	90



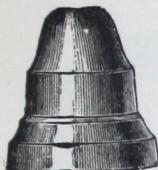
#### Novelty Buzzer



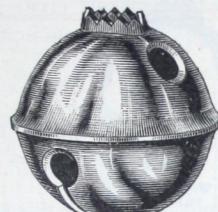
Has polished wood base, and heavy metal cover, nickel-plated. Handsome appearance.

Cat. No.	PRICES
774. Price, . . . . .	\$1 00

## Different Styles of Gongs



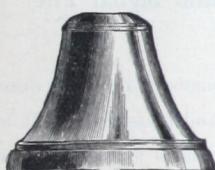
**GARLAND**  
Cat. No. 775.



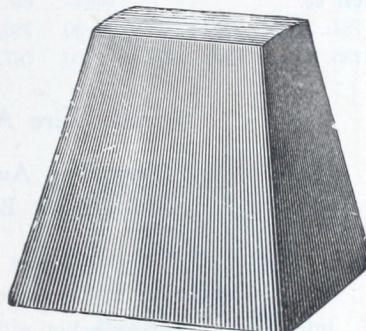
**SLEIGH**  
Cat. No. 776.



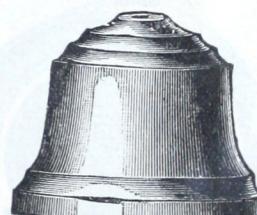
**DOME**  
Cat. No. 777.



**TEA**  
Cat. No. 778.

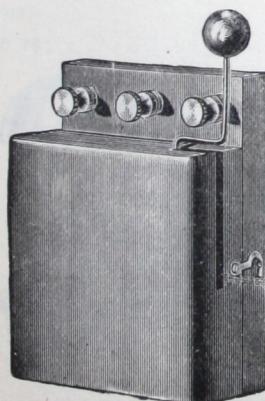


**RECTANGULAR**  
Cat. No. 779.



**MIKADO**  
Cat. No. 780.

We mount our bells with any style of gong at a slight additional cost. We also furnish a  $2\frac{1}{2}$  inch wood gong.



**Automatic Drop**  
**Or Continuous Ringing Attachment**

This attachment is used to automatically close a bell circuit and keep it closed until the ball is raised to a vertical position. When the alarm is given the armature is attracted to the magnets, causing the drop to fall, which cuts out the magnets and brings the bell in circuit with the battery.

Finished in ash, oak, cherry or walnut.

**Cat. No.**  
781. Price, each, . . . . . \$1 25

### District Telegraph Call Boxes

We Furnish District Call Boxes of all Styles. Those Listed Below are Most Universally Used

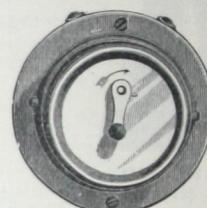


17



5

Cabinet Style.



9

Nickel Cap.

Cat. No.	PRICES	Cat. No.	PRICES	Cat. No.	PRICES
782. 1 Call, each, . . . . .	\$1 75	784. 1 Call, each, . . . . .	\$1 50	786. 1 Call, each, . . . . .	\$1 75
783. 4 or 5 Calls, each, . . . . .	2 25	785. 4 or 5 Calls, each, . . . . .	2 00	787. 4 or 5 Calls, each, . . . . .	2 25



### Novelty Fire Alarm Box

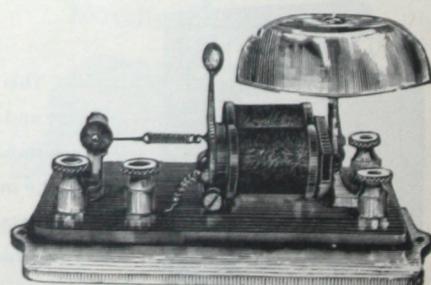
This is a Very Fine Automatic Signal Fire Alarm Box.

It is enclosed in an outside box made of iron, the door of which is provided with spring lock and glass front. It is intended for use in connection with fire alarm system in large buildings, and is placed in any desired location where the weather cannot interfere with the working of the instrument. The glass front is quickly broken in time of necessity, permitting the lever to be pulled and signal sent without loss of time in searching for the key.

Cat. No.	PRICE
788. Each, . . . . .	\$7 00

### American District Bells

Cat. No.	PRICES
789. Standard Pattern, Single Stroke, 5 Ohms, Nickel-plated Parts, Rubber Covered Spools, 3½ inch Gong, each, . . . . .	\$3 00
790. Circular Bare Pattern, Single Stroke, 5 Ohms, Cloth Covered Spools, 3½ inch Gong, each, . . . . .	2 50



See Pages 19, 20, 21 for Fire Alarm Bells.

See Page 67 for Relays for use in connection with Fire Alarm Systems.

## ANNUNCIATORS AND BURGLAR ALARMS

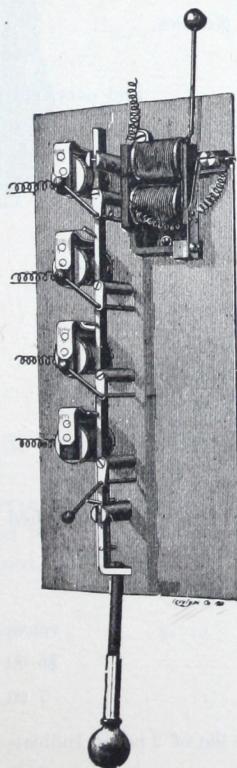
Annunciator and Burglar Alarm Movements have been greatly improved in the last few years, and the best of them are now marvels of simplicity, durability and cheapness.

### Our Improved Patent Movement

Ranks with the best, and is rapidly growing in favor. We carry a full stock of standard sizes, manufacturing special sizes to architects plans, if desired.

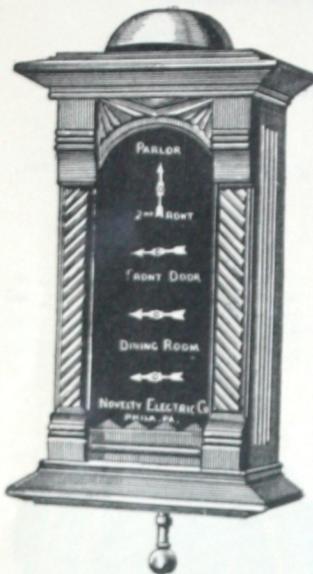
#### Annunciator Movement

Patented March 4, 1890.



Showing interior mechanism, gravity needle drop, locking attachment on armature, etc., etc.  
Special prices on large orders, and liberal discounts to the trade.

## Annunciators and Burglar Alarms



### Style "A" Case

### House Announcer

This Handsome Design Case, with 4, 6, 8, 10 or 12 Needles, furnished in quartered oak, antique oak, cherry, walnut, or yellow pine.

Cat. No.	PRICES
791. 4 Needles, . . . . .	\$6 00
792. 6 " . . . . .	8 00
793. 8 " and over, per Needle, . . . . .	1 10

### Style "B" Case

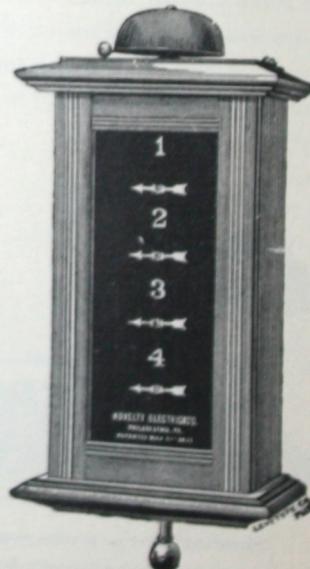
### Office Annunciator

Designed to meet a cheaper house and office trade. Furnished with 4 or 6 Needles, in oak, cherry, walnut, or white.

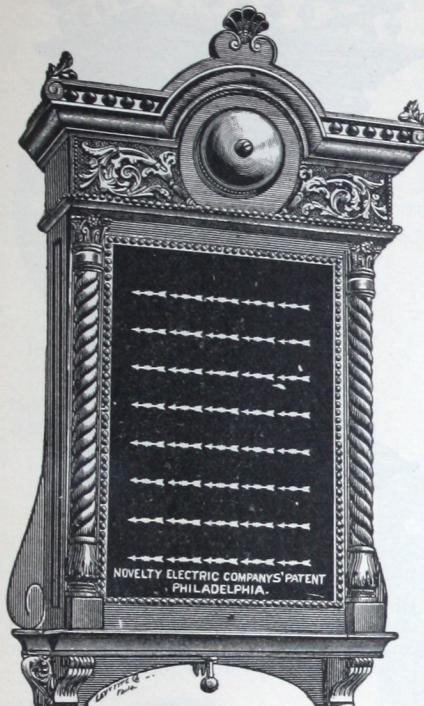
Same movement as Style #A

Cat. No.	PRICES
794. 4 Needles, . . . . .	\$5 00
795. 6 " "	7 00

See Page 18 for illustration and price list of 2 point Indicating Bell.



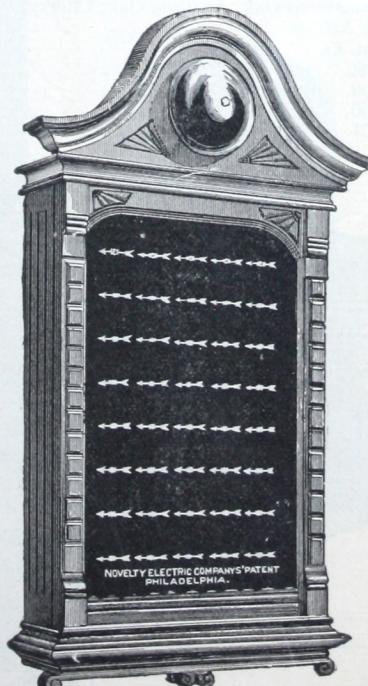
## Hotel Annunciators



## Style No. 1

Very popular design, handsomely carved and finished. Furnished in any wood desired. Made only to order, with 100 or more needles.

Cat. No.	PRICE
796. Per Needle, . . . . .	\$1 50

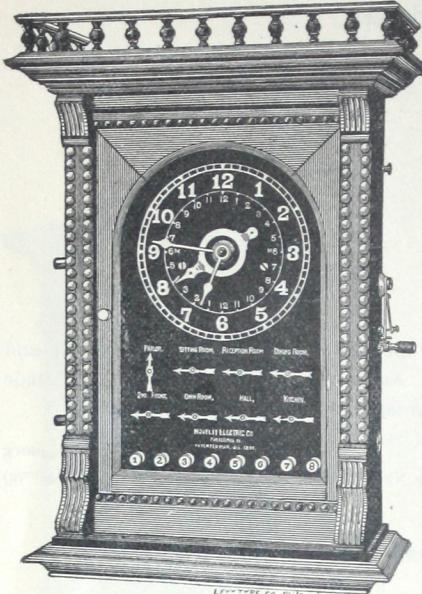


## Style No. 3

Plainer case, where a less expensive instrument than No. 1 is desired. Furnished in Quartered Oak, Antique Oak, Cherry, Ash, or Walnut.

Cat. No.	PRICE
797. 25 to 100 Needles, per Needle, . . . . .	\$1 10

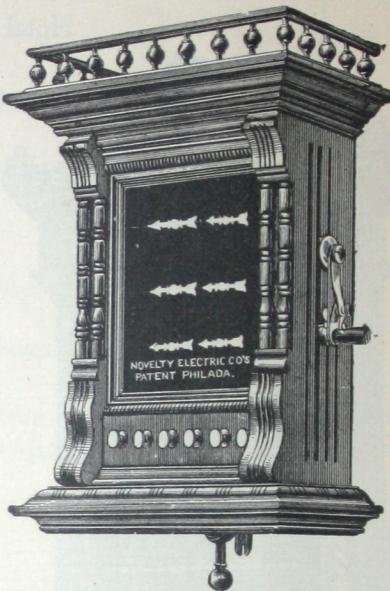
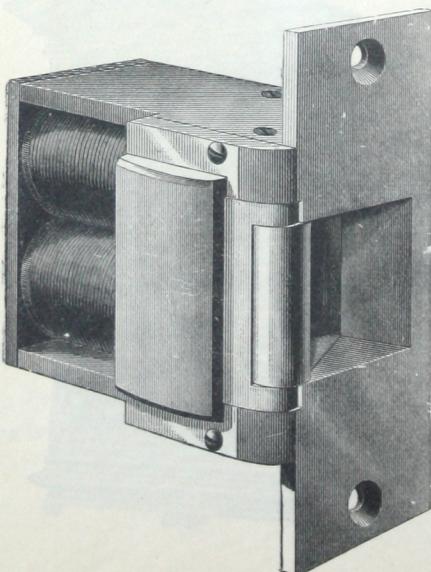
## Burglar Alarms



## WITH CLOCK

Handsome design, finely finished; Automatic and Individual Servant's Call, Silent Test, Battery Test, Individual and Circuit Cut-out, and Continuous Ringer. Furnished in Quartered Oak, Antique Oak, Cherry, Walnut, or Ash.

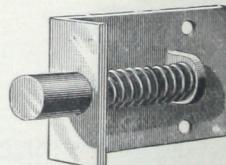
Cat. No.		PRICES
798.	4 Needles,	\$42 00
799.	6 "	48 00
800.	8 "	54 00
801.	10 "	57 00



## WITHOUT CLOCK

Handsome in design, finely finished; Battery Test, Individual and Circuit Cut-outs, and Continuous Ringer. Furnished in Antique Oak, Quartered Oak, Cherry, or Walnut.

Cat. No.		PRICES
802.	4 Needles,	\$12 00
803.	6 "	18 00
804.	8 "	24 00
805.	10 "	27 00
806.	12 "	33 00



## MORTISE DOOR OPENER

For Right or Left Hand Doors

Simple in construction. Positive and perfect in operation.

An important feature, found only in this door opener, is the *anti-friction roller* which enables it to be operated under the heaviest pressure with a very small battery power.

Each opener is tested under a heavy pressure and warranted.

Cat. No.	WIDE.	DIMENSIONS.				PRICES
		DEEP.	THICK.	OPENING.		
807. A, 2 $\frac{1}{4}$ in.	2 $\frac{5}{8}$ in.	1 in.	1 $\frac{1}{8}$ in.	1 in.	\$ 5 50	
808. B, 2 $\frac{1}{2}$ "	2 $\frac{7}{8}$ "	1 in.	1 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	6 00	

## STAMPED BRONZE PUSH BUTTONS

Size,  $2\frac{1}{4}$  in. diameter.

Furnished in antique copper and light bronze.

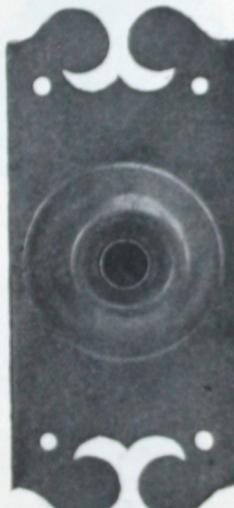
Size,  $2\frac{1}{4}$  in. diameter.

Cat. No.	PRICES
809. Per doz., . . . . .	\$1.45
Each, . . . . .	15

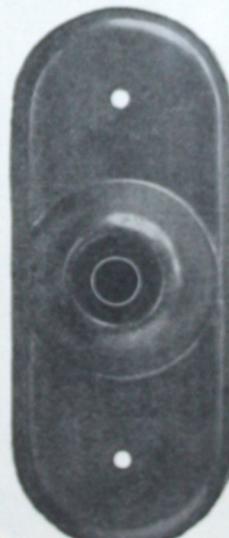
Cat. No.	PRICES
812. Per doz., . . . . .	\$1.45
Each, . . . . .	15

Size,  $1\frac{3}{4} \times 2$  in., open back.

Cat. No.	PRICES
811. Per doz., . . . . .	\$3.85
Each, . . . . .	38

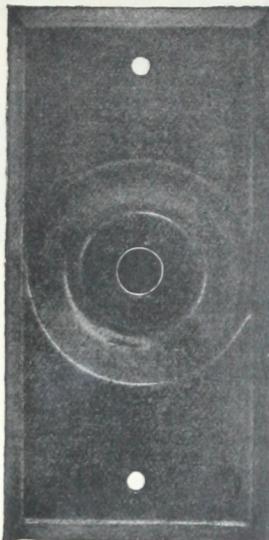
Size,  $4\frac{1}{2} \times 2$  in., open back.

Cat. No.	PRICES
811. Per doz., . . . . .	\$3.85
Each, . . . . .	38

Size,  $2\frac{1}{4} \times 2$  in., open back.

Cat. No.	PRICES
813. Per doz., . . . . .	\$3.85
Each, . . . . .	38

## Stamped Bronze Push Buttons



Size, 4x2 in., open back.

Cat. No.	PRICES
814. Per dozen, . . . . .	\$3 85
Each, . . . . .	38



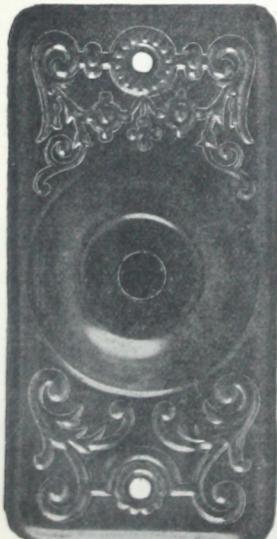
Size, 5 1/4x2 in., open back.

Cat. No.	PRICES
815. Per dozen, . . . . .	\$3 85
Each, . . . . .	38



Size, 4x2 in., open back.

Cat. No.	PRICES
816. Per dozen, . . . . .	\$3 85
Each, . . . . .	38



Size, 4x2 in., open back.

Cat. No.	PRICES
817. Per dozen, . . . . .	\$3 85
Each, . . . . .	38



Size, 5 1/4x1 3/4 in., open back.

Cat. No.	PRICES
818. Per dozen, . . . . .	\$3 85
Each, . . . . .	38



Size, 4x2 in., open back.

Cat. No.	PRICES
819. Per dozen, . . . . .	\$3 85
Each, . . . . .	38

## Cast Pushes (not Screw Cap)

Size,  $2\frac{1}{4}$  in. in diameter.Size,  $2\frac{1}{4}$  in. in diameter.Size,  $2\frac{1}{4}$  in. in diameter.

Cat. No.	PRICES	Cat. No.	PRICES	Cat. No.	PRICES
820. Per dozen, . . . . .	\$2 00	821. Per dozen, . . . . .	\$2 00	822. Per dozen, . . . . .	\$2 00
Each, . . . . .	20	Each, . . . . .	20	Each, . . . . .	20

Size,  $2\frac{1}{4}$  in. in diameter.Size,  $2\frac{1}{4}$  in. in diameter.Size,  $2\frac{1}{4}$  in. in diameter.

Cat. No.	PRICES	Cat. No.	PRICES	Cat. No.	PRICES
823. Per dozen, . . . . .	\$2 00	824. Per dozen, . . . . .	\$2 00	825. Per dozen, . . . . .	\$3 52
Each, . . . . .	20	Each, . . . . .	20	Each, . . . . .	33

Size,  $3\frac{1}{2} \times 1\frac{3}{8}$  in.Size,  $3\frac{1}{2} \times 1\frac{3}{8}$  in.Size,  $3\frac{1}{2} \times 1\frac{3}{8}$  in.

Cat. No.	PRICES	Cat. No.	PRICES	Cat. No.	PRICES
826. Per dozen, . . . . .	\$3 30	827. Per dozen, . . . . .	\$3 30	828. Per dozen, . . . . .	\$3 30
Each, . . . . .	31	Each, . . . . .	31	Each, . . . . .	31

## Cast Pushes (not Screw Cap)



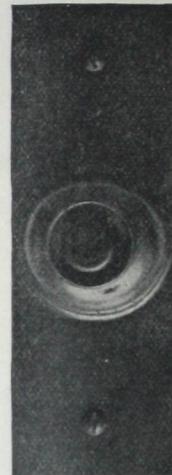
Size, 4 1/4 x 1 1/2 in.

Cat. No.	PRICES
829. Per doz., . . . . .	\$4 40
Each, . . . . .	43



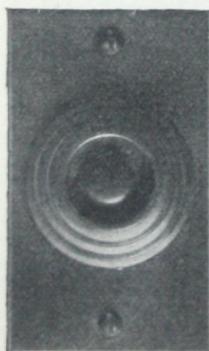
Size, 4 1/4 x 1 1/2 in.

Cat. No.	PRICES
830. Per doz., . . . . .	\$4 40
Each, . . . . .	43



Size, 4 1/4 x 1 1/2 in.

Cat. No.	PRICES
831. Per doz., . . . . .	\$4 40
Each, . . . . .	43



Size, 3 x 1 3/4 in.

Cat. No.	PRICES
832. Per doz., . . . . .	\$4 40
Each, . . . . .	43



Size, 4 5/8 x 2 3/8 in.

Cat. No.	PRICES
833. Per doz., . . . . .	\$5 50
Each, . . . . .	52



Size, 3 3/4 x 2 in.

Cat. No.	PRICES
834. Per doz., . . . . .	\$4 90
Each, . . . . .	47

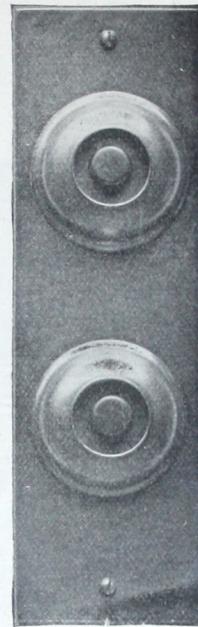
## Cast Pushes (not Screw Cap)

Size,  $5\frac{1}{4} \times 2$  in.

Cat. No.	PRICES
835. Per doz., . . . . .	\$7 15
Each, . . . . .	67

Size,  $5 \times 2$  in.

Cat. No.	PRICES
836. Per doz., . . . . .	\$4 40
Each, . . . . .	43

Size,  $7 \times 2\frac{1}{4}$  in.

Cat. No.	PRICES
837. Per doz., . . . . .	\$8 80
Each, . . . . .	80

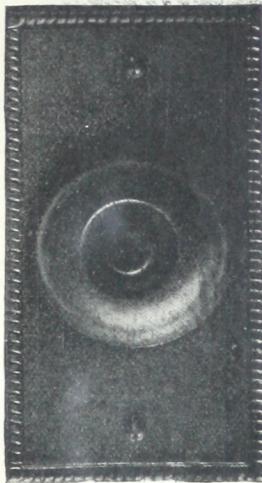
Size,  $4\frac{3}{4} \times 2\frac{5}{8}$  in.

Cat. No.	PRICES	Cat. No.	PRICES
838. Per doz., . . . . .	\$4 90	839. Per doz., . . . . .	\$4 90
Each, . . . . .	47	Each, . . . . .	47

Size,  $4\frac{3}{4} \times 2\frac{1}{2}$  in.Size,  $4\frac{1}{2} \times 2\frac{1}{4}$  in.

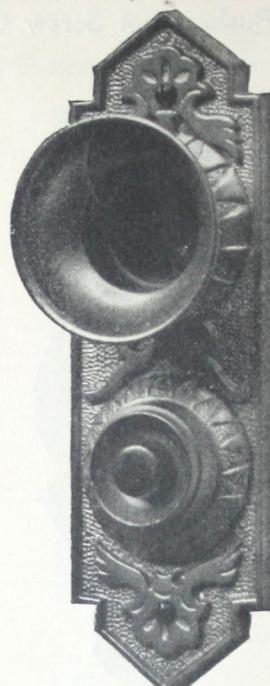
Cat. No.	PRICES
840. Per doz., . . . . .	\$4 90
Each, . . . . .	47

## Cast Pushes (not Screw Cap)



Size, 4x2 1/4 in.

**Cat. No.** PRICES  
841. Per dozen, . . . . . \$4 90  
Each, . . . . . 47



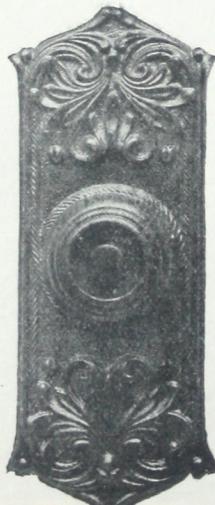
Size, 5 3/4x1 3/4 in.

**Cat. No.** PRICES  
842. Per dozen, . . . . . \$7 15  
Each, . . . . . 67



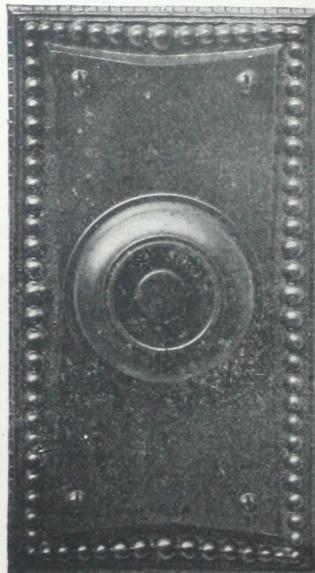
Size, 4 1/4x2 3/8 in.

**Cat. No.** PRICES  
843. Per dozen, . . . . . \$5 50  
Each, . . . . . 52



Size, 5 3/4x2 1/4 in.

**Cat. No.** PRICES  
844. Per dozen, . . . . . \$8 80  
Each, . . . . . 80



Size, 4 3/4x2 5/8 in.

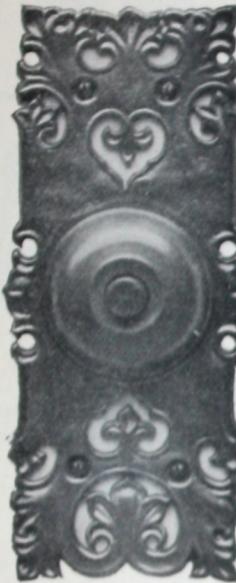
**Cat. No.** PRICES  
845. Per dozen, . . . . . \$8 25  
Each, . . . . . 75



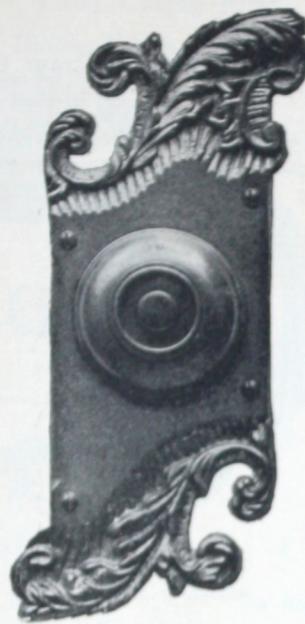
Size, 5 3/4x2 3/4 in.

**Cat. No.** PRICES  
846. Per dozen, . . . . . \$8 80  
Each, . . . . . 80

## Cast Pushes (not Screw Cap)



Size,  $6\frac{1}{2} \times 2\frac{1}{2}$  in. PRICES  
 Cat. No. 847. Per doz., . . . . . \$7 70  
 Each, . . . . . 70



Size,  $7 \times 3\frac{1}{2}$  in. PRICES  
 Cat. No. 848. Per doz., . . . . . \$8 80  
 Each, . . . . . 80



Size,  $6\frac{1}{4} \times 2\frac{1}{2}$  in. PRICES  
 Cat. No. 849. Per doz., . . . . . \$7 70  
 Each, . . . . . 70



Size,  $7 \times 2\frac{1}{2}$  in. PRICES  
 Cat. No. 850. Per doz., . . . . . \$11 00  
 Each, . . . . . 1 00



Size,  $6 \times 2\frac{1}{2}$  in. PRICES  
 Cat. No. 851. Per doz., . . . . . \$8 80  
 Each, . . . . . 80



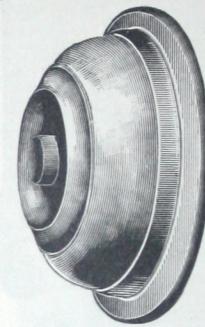
Size,  $6\frac{1}{2} \times 2\frac{1}{2}$  in. PRICES  
 Cat. No. 852. Per doz., . . . . . \$9 90  
 Each, . . . . . 90

## Cast Push Buttons (Screw Cap)

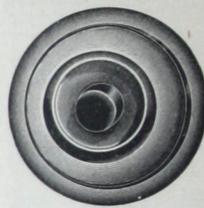
Below we illustrate a few of our Cast Push Buttons with Screw Cap. A number of our other designs can also be furnished with Screw Caps, at a slight additional cost, when so desired.



Size, 1 5/8 in. diameter.



Size, 2 3/4 in. diameter.

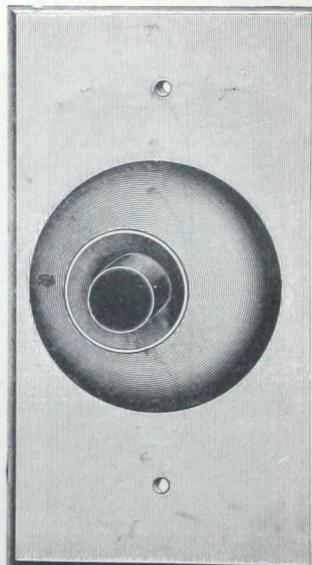


Size, 1 7/8 in. diameter.

Cat. No.	PRICES	Cat. No.	PRICES	Cat. No.	PRICES
853. Per dozen, . . . . .	\$6 00	854. Per dozen, . . . . .	\$6 50	855. Per dozen, . . . . .	\$6 00
Each, . . . . .	55	Each, . . . . .	60	Each, . . . . .	55



Size, 3 1/4x2 in.



Size, 4 3/4x2 1/2 in.



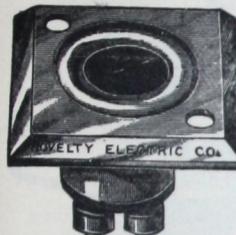
Size, 4x1 7/8 in.

Cat. No.	PRICES	Cat. No.	PRICES	Cat. No.	PRICES
856. Per dozen, . . . . .	\$10 80	857. Per dozen, . . . . .	\$12 00	858. Per dozen, . . . . .	\$10 80
Each, . . . . .	1 00	Each, . . . . .	1 10	Each, . . . . .	1 00

## Table Clamp Push

Nickel Plated. Used on Dining Tables, Desks and Other Movable Furniture

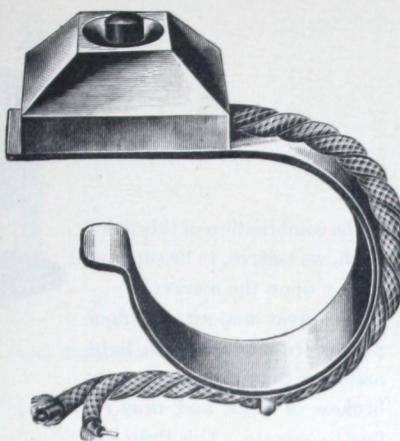
Bronze Push



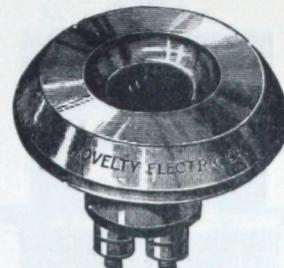
Cut full size.

PRICE

Cat. No. 859. Each, . . . . . \$ 40



Bronze Push



Cut full size.

PRICE

Cat. No. 861. Each, . . . . . \$ 40

Cat. No.

860. Each, . . . . . \$ 75

PRICE

## Wood Pushes

## Screw Caps



Cut full size.

Cat. No.	PRICE
862. Each, . . . . .	\$ 15
Per doz., each, . . . . .	12

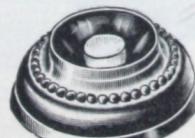
Where a small push for handsome interior finish is desired, we recommend those illustrated below.



Cut full size.

Made of Hard Rubber and Pearl.

Cat. No. 863. Each, . . . . . \$ 50



Cut one-half size.

Furnished in Maple, Cherry, Walnut or Oak.

Cat. No. 864. Each, . . . . . \$ 20



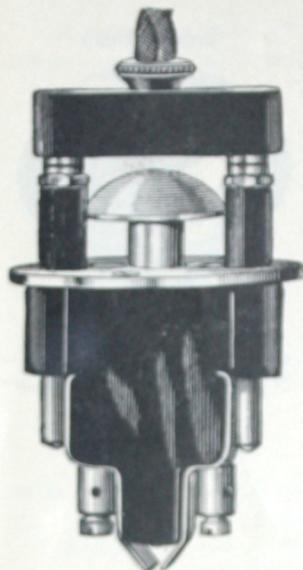
Cut full size.

Made in Oak, Cherry, Walnut and Rosewood.

Cat. No. 865. Each, . . . . . \$ 20

## Floor Pushes, Circuit Closer

## Combination Floor Push



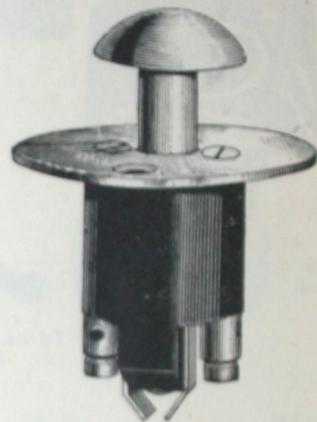
Cut full size.

Cat. No.

PRICE

866. Each, . . . . . \$ .75

## Regular Floor Push



Cut full size.

Cat. No.

PRICE

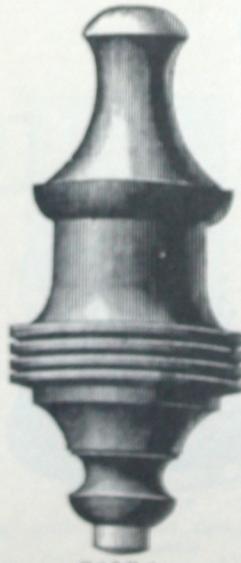
867. Each, . . . . . \$ .50

The combination of this Floor Push, we believe, to be superior to any upon the market.

The great majority of floor pushes are made of such light material that they are easily broken or bent, and thus refuse to operate. This Push will last for years with a little care.

## Push Buttons

For use in connection with Combination Floor Push



Cut full size.

Cat. No.

PRICE

868. Each, . . . . . \$ .40



Half actual size.

This Push has head rings, knob and knee of White bone. Furnished in Maple, Cherry, Oak, Mahogany, or Walnut.

Cat. No.

PRICE

869. Each, . . . . . \$ .65



Cut full size.

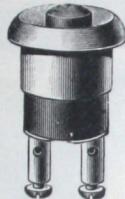
Cat. No.

PRICE

870. Each, . . . . . \$ .40

## Push Buttons

## Midget Push, Style "C"



Cut full Size.

For telephones, desk board and compound systems.

This is the smallest push manufactured.

**Cat. No.** **PRICE**  
871. With Binding Posts, . . . . . \$ 25

## Mite Push

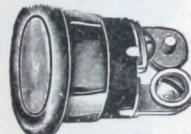


Cut full size.

Fits in  $\frac{1}{2}$  in. hole. An exceptionally good Push.

**Cat. No.** **PRICE**  
872, . . . . . \$ 30

## Midget, Jr., Push



Cut full size.

Fits in  $\frac{5}{8}$  in. hole. Same style as Midget Push, only smaller.

**Cat. No.** **PRICE**  
873. Pearl Centre . . . . . \$ 30

## Desk Push



**Cat. No.** **PRICE**  
874. Heavy Cast Bronze, Platinum Contact Points, . . . . . \$ 50

## Midget Pushes



Fits in  $\frac{3}{4}$  inch hole.  
Front view.



Rear view.

## PRICES

**Cat. No.** **PRICES**  
875. White or Black Centres, . . . . . \$ 24  
876. Light or Dark Pearl Centres, . . . . . 30  
877. Red or Blue Centres, . . . . . 30  
878. Lettering on Celluloid Centres, per Button, . . . . . 12

## Number Plates. Nickel Plated

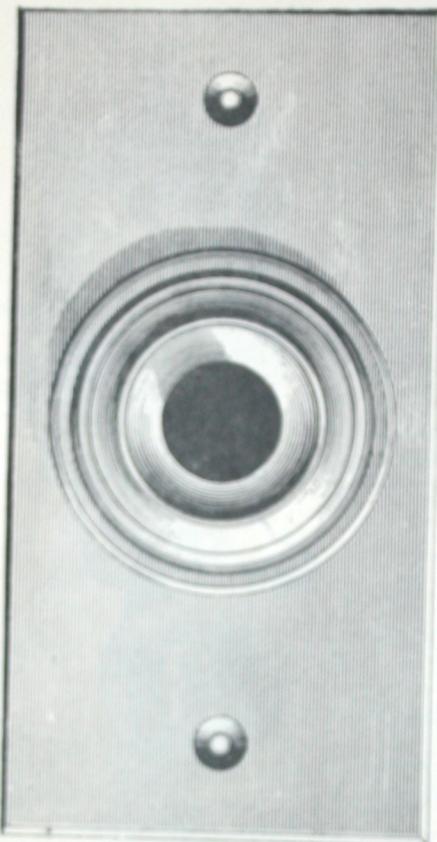


For use with Midget Pushes.

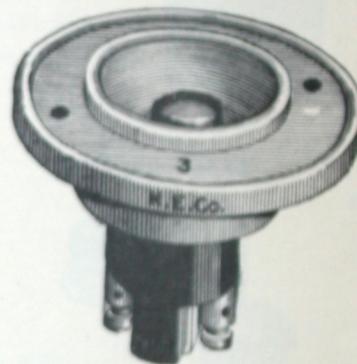
**Cat. No.** **PRICES**  
879, . . . . . \$ 5  
880. Lettering, per letter, . . . . . 2

## Push Buttons

### Novelty—Plain Polished Bronze Push



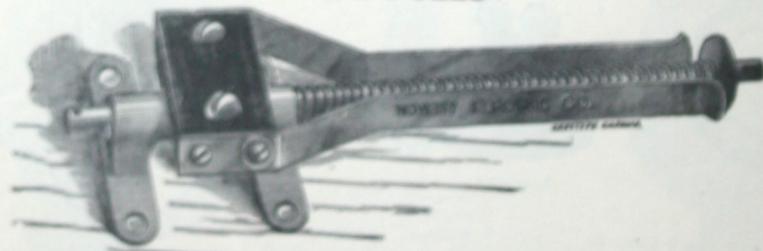
No. 887



No. 993

Cat. No.		size	Metal, each,	\$	60
881. Each,			" per doz., each,		55
With Harrison Contacts,		1 50	883. Hard Wood, each,		45

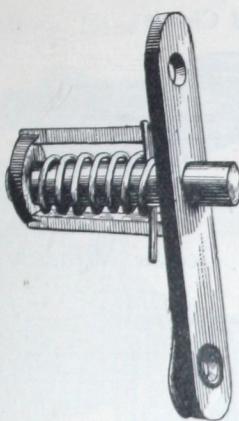
CIRCUIT CLOSING ATTACHMENT FOR MECHANICAL  
BELL PULLS



Cat. No.	PRICES
884. 1 Connection, each,	\$ 35
885. 2 " " "	40
886. 3 " " "	50

## DOOR SPRINGS

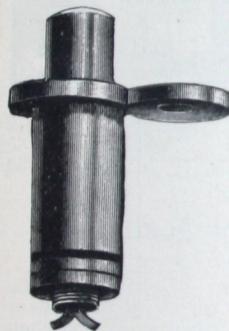
## Novelty Door Spring



The scraping contact keeps both contacts clean and free from dust, rust, etc., insuring a perfect connection.

Cat. No. 887. Each, . . . . . PRICE \$ 20

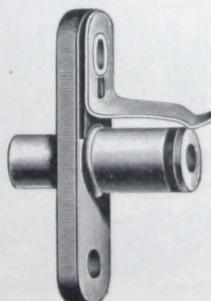
## Telescope Door Spring



The Telescope Door Spring, as shown in cut, requires but one screw to hold firmly in position.

Cat. No. 888. Each, . . . . . PRICE \$ 20

## Small Door Springs

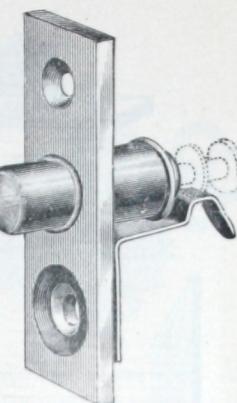


For use on Thin Doors, Single Swing Transoms, etc.

Being small, it is easily applied.

Cat. No. 891. Each, . . . . . PRICE \$ 20

## Make and Break Door Spring

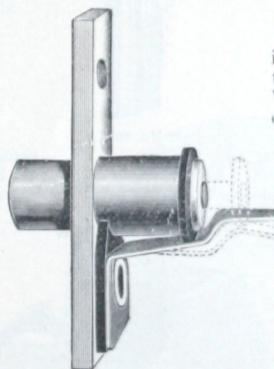


For use on Store Doors, etc.

Contact is made as the door opens and as it shuts, but not while it is open or shut.

Cat. No. 889. Each, . . . . . PRICE \$ 24

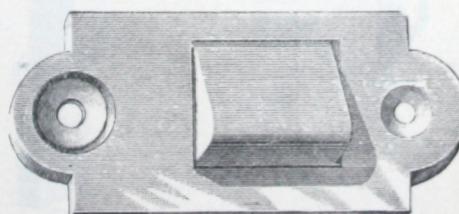
## Closed Circuit Door Springs



When the door is closed the contact is established. When open the contact is broken.

Cat. No. 890. Each, . . . . . PRICE \$ 24

## Transom Spring

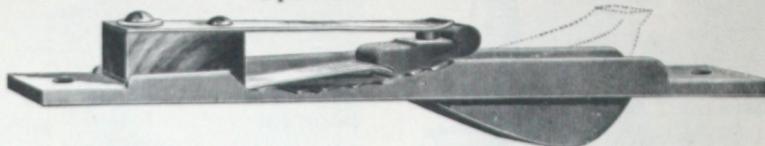


For use on Transoms, French or Pivot Windows, etc.

Cat. No. 892. Each, . . . . . PRICE \$ 70

## Window Springs

Open or Closed Circuit

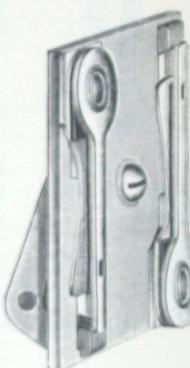
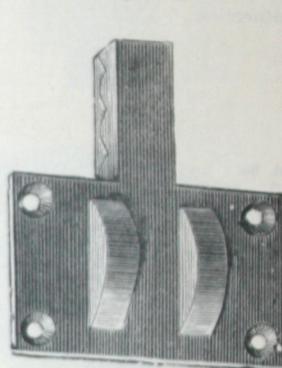
Cat. No.  
893.PRICE  
\$ .30

## Single Window Springs

Cat. No.  
894. Each, . . . . .  
895. " . . . . .  
PRICES  
\$ .20  
\$ .20

No. 895.

## Double Window Springs

Cat. No.  
896. Each, . . . . .  
897. " . . . . .  
PRICES  
\$ .35  
\$ .35

No. 897.

## Door Trips



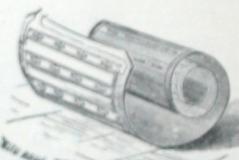
No. 894.

The contact is made by opening the door.

There is no contact while the door is closed or open.

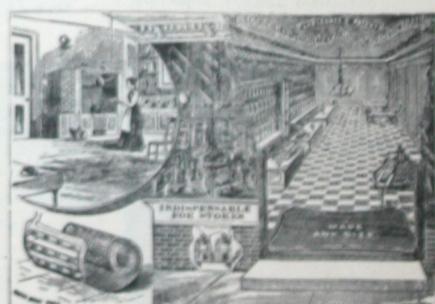
Cat. No. . . . .  
898. . . . .  
PRICE  
\$ .60

## Electric Floor Matting



YOU STEP HERE

Placed under the carpet or other floor covering, and when trod upon sounds an alarm in any part of the building desired.



Cat. No. . . . .  
899. Per square foot, . . . . .  
PRICE  
\$ .25

## SWITCHES

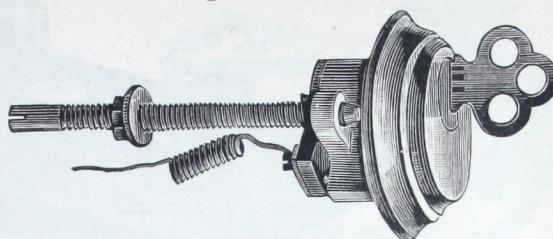
## Novelty Hollow Base



Cat. No.	PRICES
900. 1 Point, each, . . . . .	\$ 25
901. 2 " " . . . . .	30
902. 3 " " . . . . .	33

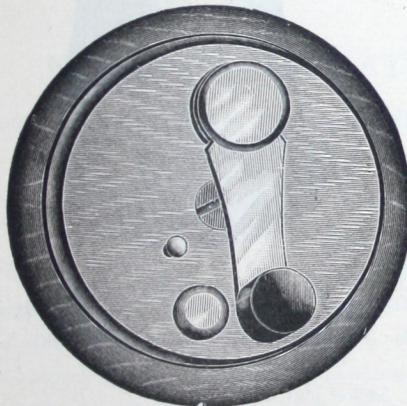
## Yale Lock

## Burglar Alarm Switch



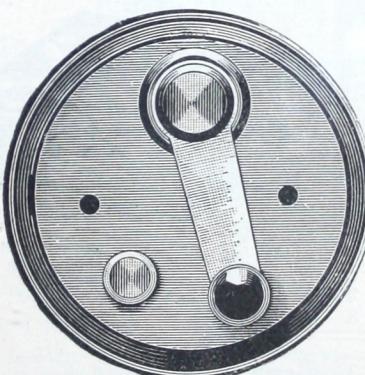
For use on doors of residences, stores and other buildings connected with burglar alarm systems, so that persons having the proper key can go in or out of the building without ringing the alarm.

Cat. No.	PRICE
903. Each, . . . . .	\$3 00



Round wood.

Cat. No.	PRICES
904. 1 Point, each, . . . . .	\$ 20
905. 2 " " . . . . .	23
906. 3 " " . . . . .	26
907. 4 " " . . . . .	30
908. 5 " " . . . . .	34
909. 6 " " . . . . .	38
910. 7 " " . . . . .	42
911. 8 " " . . . . .	46
911. 9 " " . . . . .	50
913. 10 " " . . . . .	54

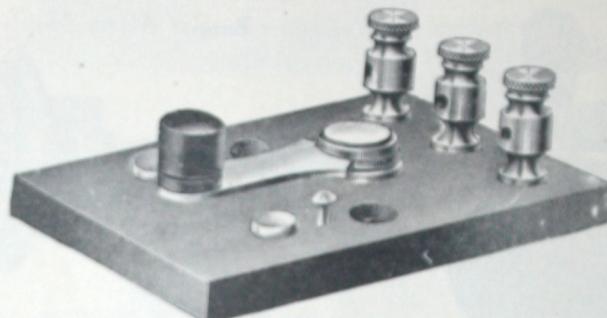


Round rubber.

Cat. No.	PRICES
914. 1 Point, each, . . . . .	\$ 50
915. 2 " " . . . . .	55
916. 3 " " . . . . .	60
917. 4 " " . . . . .	70
918. 5 " " . . . . .	80
919. 6 " " . . . . .	90
920. 7 " " . . . . .	1 00
921. 8 " " . . . . .	1 10
922. 9 " " . . . . .	1 20
923. 10 " " . . . . .	1 30

## Wood and Rubber Switches—Continued

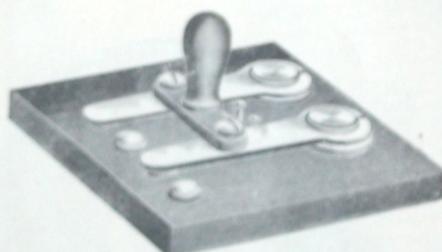
## Rubber Base with Binding Posts



Cat. No.	PRICES
924. 1 Point, each,	\$ 45
925. 2 " "	50
926. 3 " "	55

## Novelty Hard Rubber Base Switch

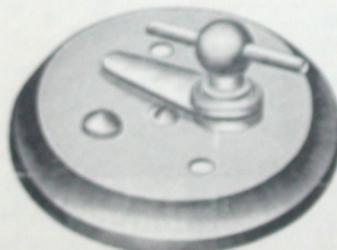
## Pole Changing



Cat. No.	PRICES
927. 1 Point, each,	\$ 70
928. 2 " "	80
929. 3 " "	90

Cat. No.	PRICES
930. Reversing or Pole Changing Switch, Rubber, each,	\$ 2.00
931. Reversing or Pole Changing Switch, Wood Base, each,	1.25

Bases highly polished. All parts made of Brass. Nickel plated.  
Can make any style or shape switch to order. Send sample or sketch for estimate.



Cut full size.

## Metal Switches

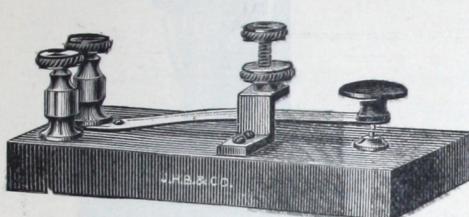
Nickel plated base and parts.

Neat, compact, and perfect in action. The *spring clip* on back holds the switch arm securely in place, preventing accidental make or break.

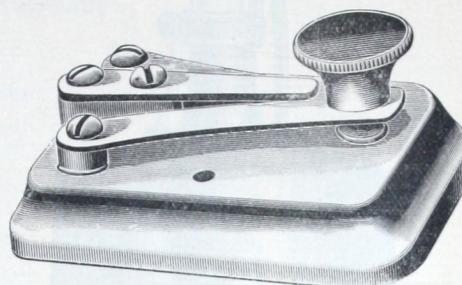
Cat. No.	PRICES
932. 1 point,	\$ 20
933. 2 "	26
934. 3 "	32

Oxydizing, 10 cents additional.

## SIGNAL OR STRAP KEYS



Cat. No.	PRICES
935. Open circuit, . . . . .	\$ .75
936. Closed " . . . . .	.75
937. Top and bottom contact, . . .	1.00



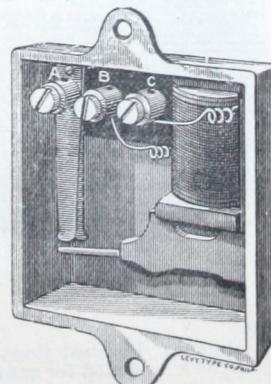
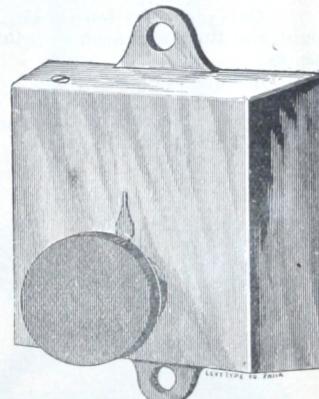
Cat. No.	PRICE
938. Metal base, top and bottom contact	\$1.00

## NOVELTY AUTOMATIC DROP

## Continuous Ringing Attachment. Nickel-plated Case.

When electrically connected in the circuit of an ordinary vibrating electric bell, this attachment makes the ringing of the bell continuous, when the electric push-button is pressed. The turning of the knob on the outside of the case, as shown in cut, bringing the arrow to a perpendicular position, stops the ringing of the bell. In connection with an electric door bell this attachment is valuable, causing the electric vibrating bell to ring till the call is answered by the servant and the connection broken by turning the knob. When desired, a switch to cut out the continuous attachment, can be introduced.

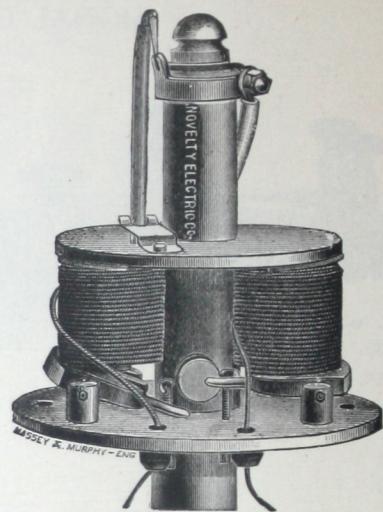
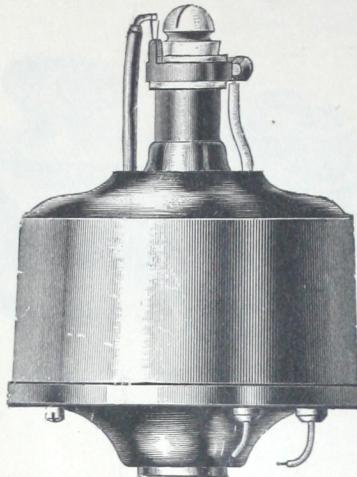
Cat. No.	PRICE
939. Each, . . . . .	\$1.25



Cuts full size.

## BURNERS

### Boston Automatic Burner



Cuts represent burner with and without shell. The valve in this and Holtzer burner is gas tight, and the mechanism such that the valve cannot be opened by any jar or vibration of building.

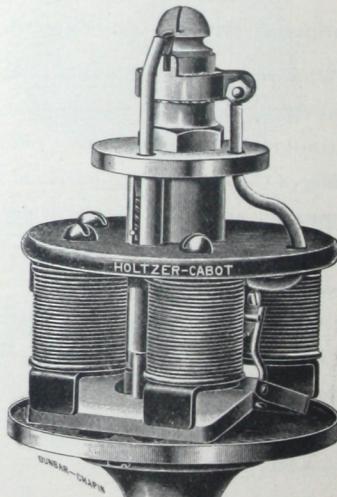
**Cat. No.**

		PRICES
940.	Boston. Polished Brass, each, . . . . .	\$5 00
941.	" For outside use, " . . . . .	8 00
942.	" Fitted for gasoline, " . . . . .	6 00

### The Improved Holtzer Automatic



Simple,  
Positive,  
Efficient,  
Durable



**Cat. No.**

		PRICES
943.	Holtzer. Polished Brass, each, . . . . .	\$5 00
944.	" Fitted for gasoline, each, . . . . .	6 00

**We are Sole Agents for the sale of the Holtzer Automatic Burner.**

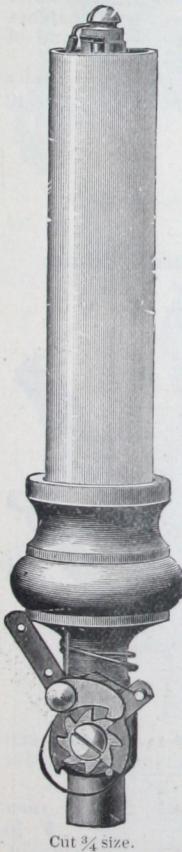
Note the Extended Magnet Poles, the strongest action with the least current.

## CANDLE BURNERS

### Ratchet and Automatic

The increased use of Candle Burners in residences, etc., has caused a large demand for burners fitted with the ratchet and automatic attachments.

The automatic attachment is especially desirable for use in halls, dining room fixtures, and in all positions difficult of reach.



Cut  $\frac{3}{4}$  size.

Plain white candle slips are furnished with the burners unless otherwise ordered.

The regular length "over all" from base of burner to lava tip is 6 inches.

We fit these burners to special candle attachments when desired.

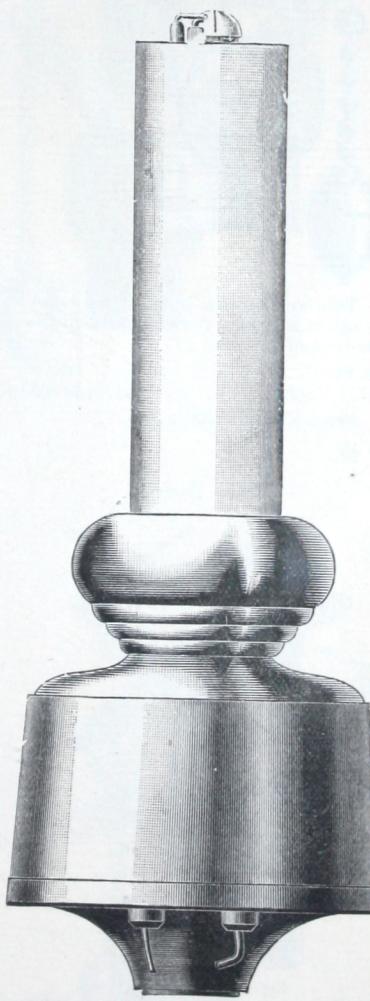
Cat. No. PRICES

945. Ratchet Candle Burner,  
Polished Brass, with  
Candle Slip, without  
Chain, each, . . . . \$2 75

Nickel plated, 10c. extra, net.

946. Automatic Candle  
Burner, Boston or  
Holtzer, Polished  
Brass, with Candle  
Slip, each, . . . . \$7 50

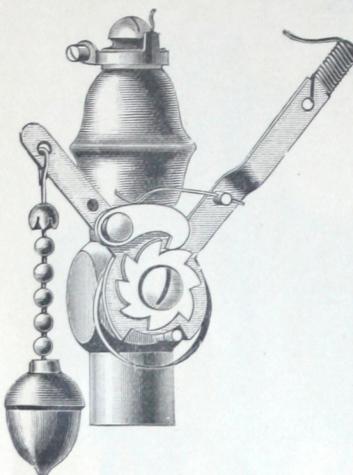
Prices on gold plating or special coloring furnished upon application.



Cut full size.

## Ratchet Burners

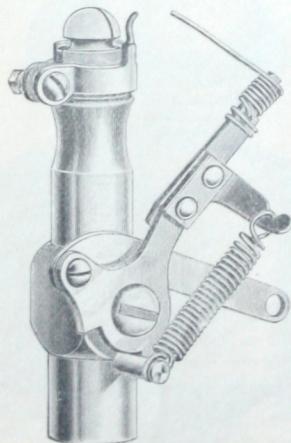
Boston Ratchet



This well known burner has been in operation many years, and gives the best of results.

Cat. No. 947. Each, . . . . . \$1 00  
Price without chain pull.

Victor Burner

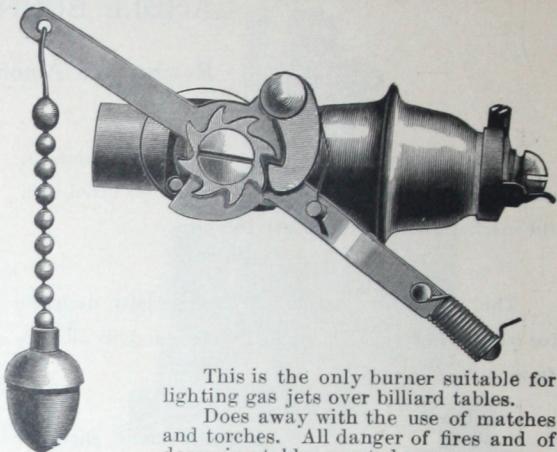


Cat. No. 950. Each, . . . . . \$ 70  
Complete with 6 in. stiff pull

Burners finished in brass; polished and lacquered; gold plating, nickel plating and special coloring extra.

We make a specialty of repairing gas lighting systems.

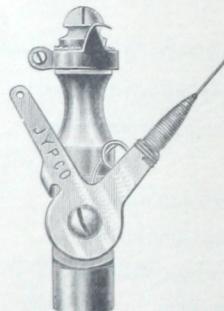
Boston Billiard Ratchet



This is the only burner suitable for lighting gas jets over billiard tables. Does away with the use of matches and torches. All danger of fires and of damaging tables averted.

Cat. No. 948. Each, . . . . . \$1 10  
Without chain pull.

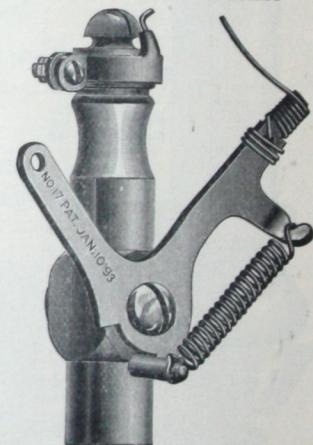
Jyco Burner



Neat and attractive in appearance.

Cat. No. 949. Each, . . . . . \$ 70  
Price includes 6 in. stiff pull.

"Seventeen" Burner

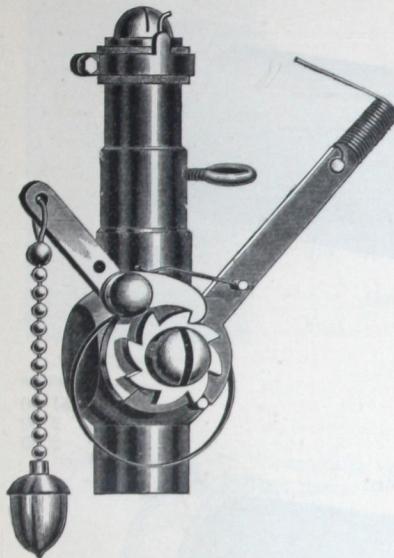


Designed for contractors and others for close competitive work.

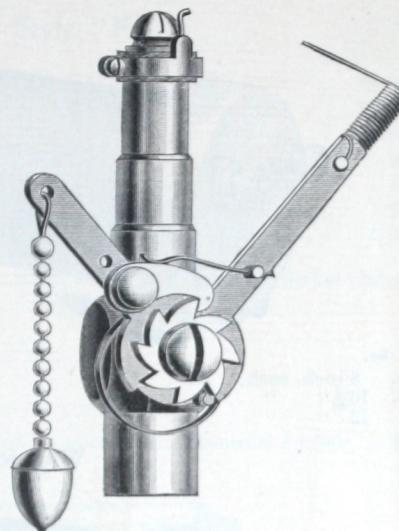
Cat. No. 950 A. Each, . . . . . \$ 70  
Price includes 6 in. stiff pull.

## Ratchet Burners—Continued

Ratchet Clough Tip Burner



Ratchet Maxim Burner

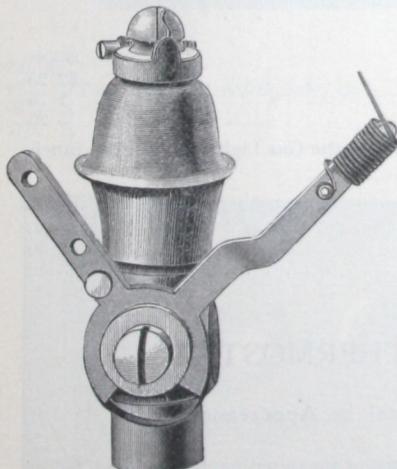


For lighting gasoline. These burners are especially fitted for this use.

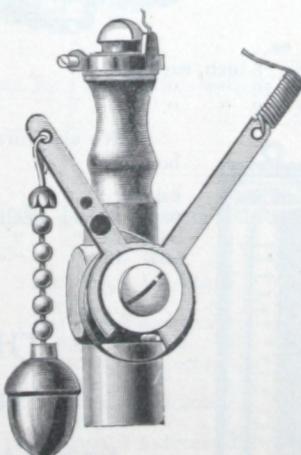
Cat. No.	PRICES
951. Clough Tip, each, . . . . .	\$1 25
952. Maxim " " . . . . .	1 25

## Plain Burners

Plain Bulb Burner



Plain Pillar Burner



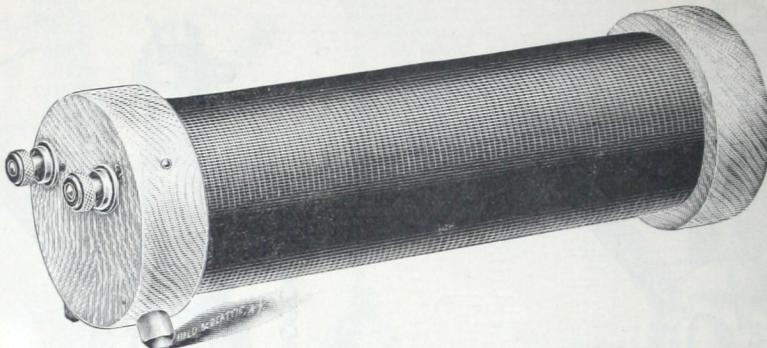
In using this burner it is necessary to turn the gas off and on from the gas cock on the fixture.

Cat. No.

953. Bulb, each, . . . . .	\$ 60
954. Pillar, " . . . . .	60

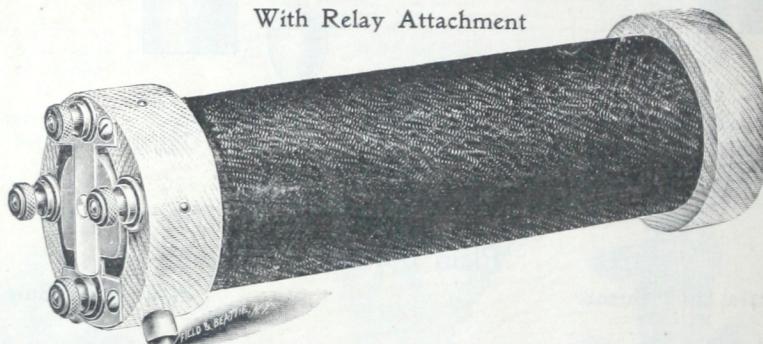
## SPARK COILS

All Styles made in 8, 10 and 12 inch.  
For Gas Lighting



Cat. No.	PRICES
955. 8 inch, each, . . . . .	\$1 50
956. 10 " " . . . . .	2 00
957. 12 " " . . . . .	2 50

## With Relay Attachment

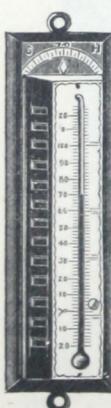


Cat. No.	PRICES
958. 8 inch, each, . . . . .	\$2 25
959. 10 " " . . . . .	2 75
960. 12 " " . . . . .	3 25

We also furnish Gas Engine Coils similar to the Gas Lighting Coil, but much heavier.

## Cat. No.

Cat. No.	PRICES
961. 8 inch, each, . . . . .	\$2 50
962. 10 " " . . . . .	3 00
963. 12 " " . . . . .	3 50



## THERMOMETER THERMOSTAT

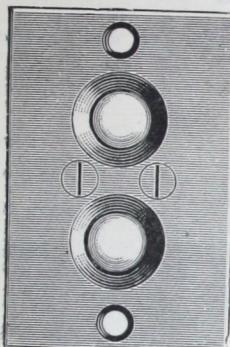
Nickel Plated, Ornamental in Appearance

For use in Automatic Fire Alarm Systems, or for signaling the rise and fall of temperature through an electric wire, in circuit with a battery and electric bell.

## Cat. No.

Cat. No.	PRICE
964. Each, . . . . .	\$3 00

## KEYS FOR OPERATING AUTOMATIC GAS BURNERS



Lighting Key.

## Style "F"

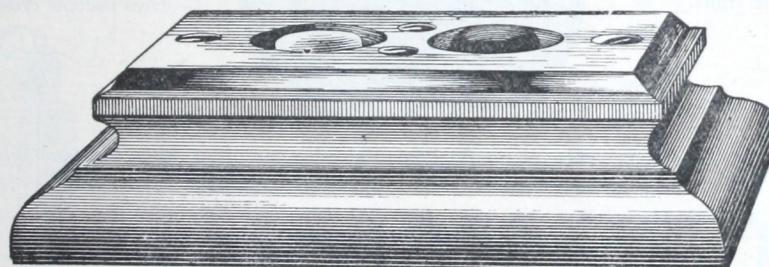
## Cat. No.

		PRICES
965.	2 Buttons, for 1 Automatic, each,	\$ .40
966.	4 " " 2 " "	60
967.	6 " " 3 " "	80
968.	8 " " 4 " "	1 10
969.	10 " " 5 " "	1 35
970.	12 " " 6 " "	1 60

Handsome Design, with Pearl Buttons and Nickel-plated Face.

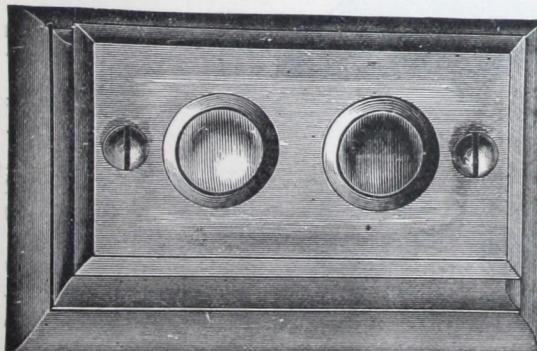
## Style "A"

Same as Style "F," excepting that key is mounted on wood base. Mounted on Oak, Ash, Cherry, Mahogany or Walnut Bases.



Lighting Key.

Cat. No.	PRICES	Cat. No.	PRICES
971. 2 Buttons, for 1 Automatic, each,	\$ .55	974. 8 Buttons, for 4 Automatic, each,	\$1 .40
972. 4 " " 2 " "	80	975. 10 " " 5 " "	1 70
973. 6 " " 3 " "	1 10	976. 12 " " 6 " "	2 00



## Style "D," Wood Base

Cat. No.	PRICES
977. 2 Buttons, 1 Automatic, each,	\$ .45
978. 4 Buttons, 2 Automatic, each,	65
979. 6 Buttons, 3 Automatic, each,	85
980. 8 Buttons, 4 Automatic, each,	1 10
981. 10 Buttons, 5 Automatic, each,	1 45
982. 12 Buttons, 6 Automatic, each,	1 60

Other sizes made to order.

## INSULATING BURNER BUSHING

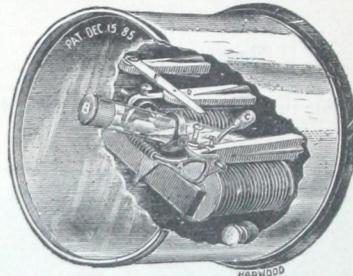


To attach pendant and automatic burners to combination Gas and Electric Light Fixtures.

Endorsed by the Fire Underwriters' Association.

Cat. No.	PRICES
983. Each, . . . . .	\$ 10
Per dozen, . . . . .	1 00

## BATTERY CUTOUT



The Cover here shown has a glass front.

Will always disconnect and save the battery if the wires become crossed.

By use of this cutout owners of Gas Lighting Batteries can often, when the system is out of order detect the trouble and easily remedy same, and thereby save the battery and the expense necessitated by calling in an electrician.

Cat. No.	PRICE
984. Each, . . . . .	\$4 50

## WOOD CLEATS



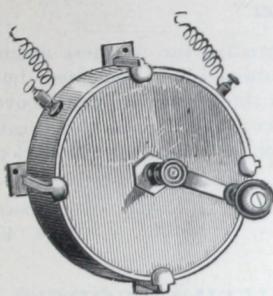
Cat. No.	PRICE
985. 1, 2, 3 or 4 hole, per 100, . . . . .	\$1 25

## TACKS AND STAPLES

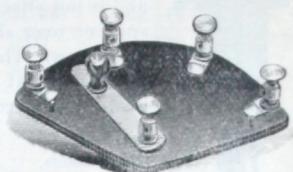
Cat. No.	PRICE
986. Per pound, . . . . .	\$ 25
Double Pointed Tacks, Nos. 9, 10, 11, 12, 14.	
Staples, Nos. 1, 2, 3, 4, 5, 6.	

## MULTIPLE GAS LIGHTING APPARATUS

### Frictional Electric Machines In Three Sizes



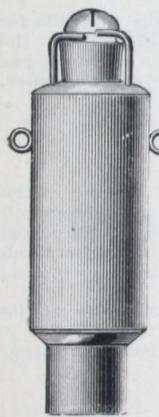
These machines are all in polished Hard Rubber Cases; the material and workmanship throughout are of the best. The first frictional electric machines installed for gas lighting in this country, twenty years ago, were of this make, and their steady continuous use ever since is sufficient evidence of their practical efficiency.



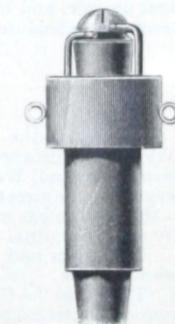
Cat. No.	PRICES
987. 12 inch, 100 Light,	\$65 00
988. 9 " Duplex, 75 "	55 00
989. 9 " Single, 36 "	40 00

Switches on Hard Rubber Bases for any number of circuits.

### Multiple Burners



Burner "A" has a Porcelain Body in one piece; is neat, strong, easily wired, and is used on all styles of fixtures.



Burner "C" is of Porcelain in one piece, and is designed especially for imitation candle burners, in the smallest size of which it can be used. It is the only electric tip that can be practically wired inside the candle.

Full Size, A.

Cat. No.	PRICE
990. Each, . . . . .	\$ .40

The electrodes are so constructed as to provide a means of wiring that is easy and rapid.

Full Size, C.

### Multiple Gas Tips

Style 23 is a Porcelain-Tip Burner. It is tough and durable, and is not likely to become broken, either in handling or through heat.

Style 23.



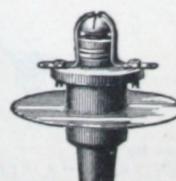
Cat. No.	PRICE
992. Each, . . . . .	\$ .40

Smith style consists of a lava Gas Tip, provided with a Guard Flange of Mica, midway between the upper and lower ends of the tip, which insulates the electrodes from the metallic burner pillar. These tips fit the ordinary gas pillar.

Half Size.

Cat. No.

Cat. No.	PRICE
993. Smith Tip, each, . . . . .	\$ .50



Smith's Multiple Gas Tip.

## Multiple Gas Lighting Apparatus—Continued

## Style 18



## Multiple Porcelain Burner

The porcelain pillar is stout and capable of withstanding the roughest usage, and is not affected by heat. The metallic top and bottom is not cemented, but spun on over shoulders on the porcelain body. Screw threads are provided above and below. The tip is of nickel-plated iron, and screwed into place, so that it can be changed at any time if desirable. This tip will not burn out, nor will it clog readily. The conductors are unbreakable and lasting.

Cat. No.

994. Each, . . . . .

PRICE  
\$ 40

## PORTABLE DYNAMO-ELECTRIC GAS LIGHTING TORCH

This instrument includes in itself a complete Electric Gas Lighting Apparatus, applicable to the ignition of every gas jet in a building; all condensed into a simple device which can be employed by a child without training. In its manufacture and use no battery, acids or chemicals of any kind are employed, and no wires or special apparatus is required on the gas fixtures. It is entirely mechanical in construction and operation, and therefore requires NO RECHARGING AT ANY TIME. In use, it is only necessary to place the end of the torch in the issuing gas at the burner and press the button with the thumb.

By its use absolute safety from risk of fire is secured, as it obviates entirely the necessity for matches, burning paper, or the torch. It can be used among inflammable combustibles without the least danger, and has been adopted exclusively by dry-goods houses, silk and cotton mills. It has become an absolute necessity in hotels, theatres, warehouses, factories, stores and dwelling houses.

## Style "A"—Straight Stem

Figure 1 is the Straight Stem, Style "A" Lighter, which is the one employed for use in the majority of instances. It may be used for the ignition of any ordinary gas light, as the common burner, Argand, Welsbach or other incandescent light; or for gas stoves, gas-log or imitation coal fires; also for street lamps or lanterns. It is only necessary to place the spark-terminal of the torch in the issuing gas and press the button with the thumb. Where lights are surrounded by globes, the spark-terminal is first thrust through the bottom of the globe holder.

The upper end of the torch is supplied with a clutch or key, which serves to turn on or off the gas stop-cock.

The Style "A" is kept in stock in two sizes only, 24 and 36 inches long, the measurement being from one extreme to another.

Larger sizes made to order.

Figure 2 represents the Welsbach attachment.

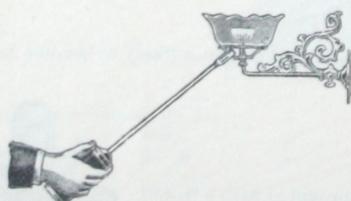


Fig. 1.

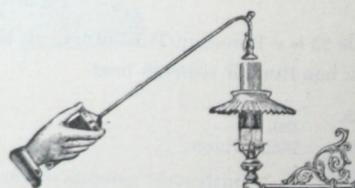


Fig. 2.

Cat. No.

Cat. No.	PRICES
995. Style "A" Lighter (Straight Stem), 24 inches long, each, . . . . .	\$5 00
996. " " " " 36 " " " " "	5 50
997. Welsbach Attachment to Style "A," extra, " . . . . .	50
998. Style "B" Lighter (Curved Stem), 24 inches long, " . . . . .	5 50
999. " " " " 36 " " " " "	6 00

## BEAD CHAIN, ACORNS, CUPS AND PINS, ETC.



Bead Chain, complete with Acorn.

	Cat. No.				
Lengths, . . . . .	1000.	1001.	1002.	1003.	1004.
	4 in.	6 in.	8 in.	10 in.	12 in.
Price, each, . . . . .	10c.	12c.	14c.	16c.	18c.

## Bead Chain, Gilt

Cat. No.	PRICE
1005. Per yard, . . . . .	\$ 25

## Acorns

1006. Per dozen, . . . . .	35
----------------------------	----

## Cups and Pins

1007. Per dozen, . . . . .	15
----------------------------	----

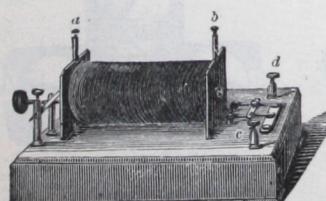


## GLASS BALLS

Cat. No.	PRICE
1008. Each, . . . . .	\$ 25

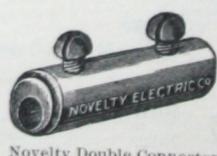
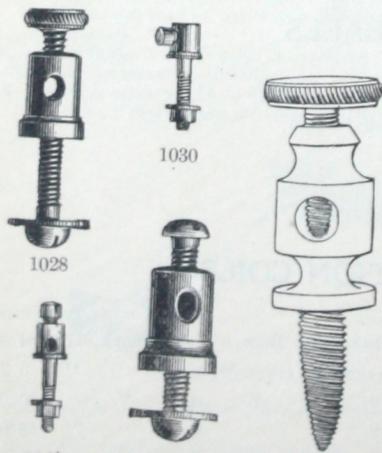
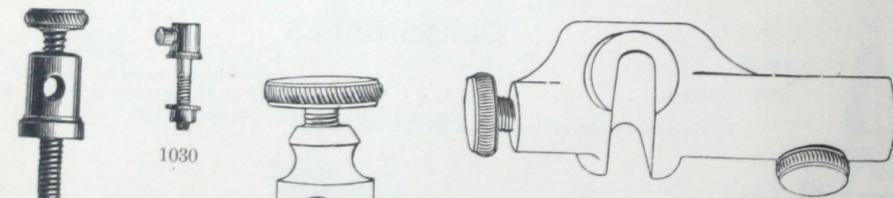
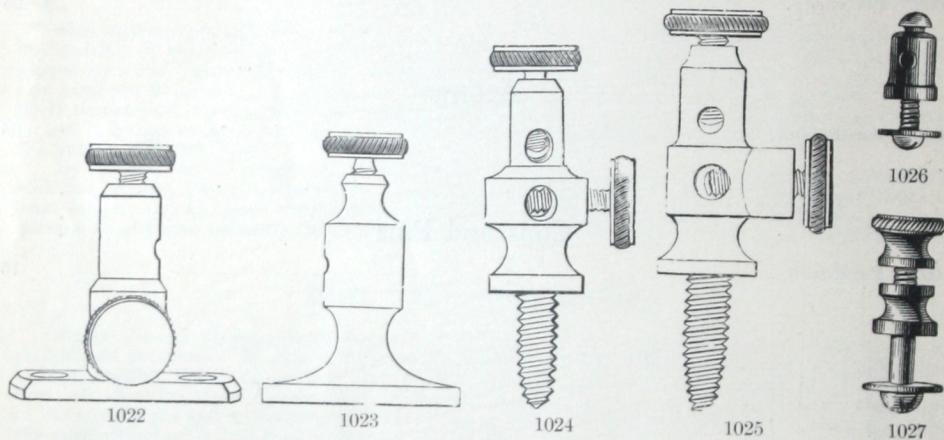
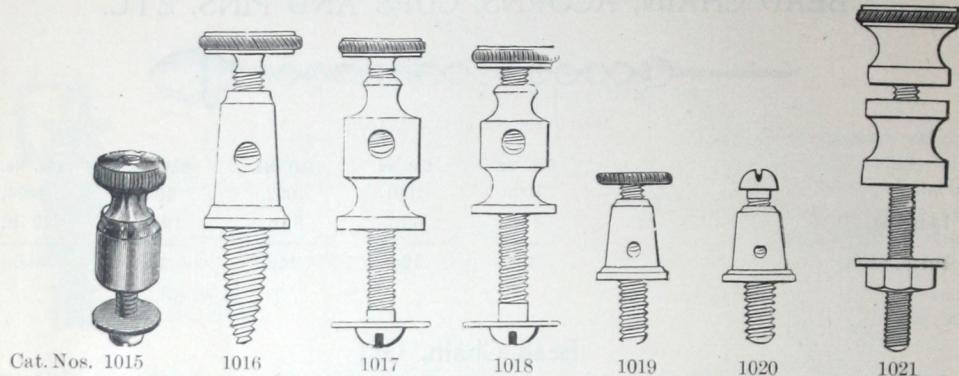
Gives a very attractive finish to the chain pull.

## RHUMKORFF INDUCTION COILS



Cat. No.	SIZE SPARK.	PRICES
1009. Mounted on Mahogany Base,	$\frac{1}{8}$ in. spark, each,	\$4 50
1010. " with current reverser,	$\frac{1}{4}$	" " 5 25
1011. " " "	$\frac{3}{8}$	" " 10 00
1012. " " "	$\frac{3}{4}$	" " 18 00
1013. " " "	$1\frac{1}{8}$	" " 28 50
1014. " " "	$1\frac{1}{2}$	" " 43 00

## NOVELTY BINDING POSTS AND WIRE CONNECTORS



See page 57 for prices.

## Binding Posts and Connectors—Price List

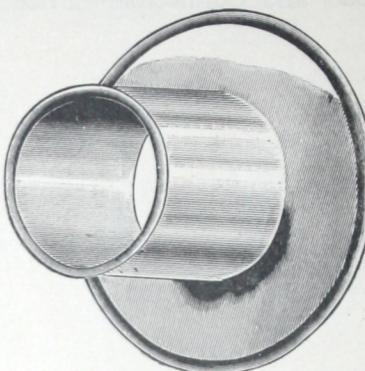
Cat. No.		PRICES
1015.	Novelty Binding Posts, brass, each, . . . . .	\$ 5
1016.	" " " " "	8
1017.	" " " " "	10
1018.	" " " " "	8
1019.	" " " " "	7
1020.	" " " " "	5
1021.	" " " " "	8
1022.	" " " " "	18
1023.	" " " " "	16
1024.	" " " " "	15
1025.	" " " " "	15
1026.	" " " " "	4
1027.	" " " " "	5
1028.	" " " " "	6
1029.	" " " " "	5
1030.	" " " " "	5
1031.	" " " " "	6
1032.	" " " " "	14
1033.	Triple Contact Connectors, No. 000, brass, each, . . . . .	36
1034.	" " " " 00, " "	33
1035.	" " " " 0, " "	30
1036.	" " " " 1, " "	25
1037.	" " " " 2, " "	16
1038.	" " " " 4, " "	14
1039.	" " " " 6, " "	12
1040.	" " " " 8, " "	10
1041.	" " " " 10, " "	7
1042.	Double " " " 000, " "	32
1043.	" " " " 00, " "	25
1044.	" " " " 0, " "	20
1045.	" " " " 1, " "	16
1046.	" " " " 2, " "	14
1047.	" " " " 3, " "	12
1048.	" " " " 4, " "	10
1049.	" " " " 6, " "	8
1050.	" " " " 8, " "	7
1051.	" " " " 10, " "	6
1052.	Jump Connector, brass, each, . . . . .	15

## SPEAKING TUBE MATERIAL

## Collars for Flexible Terminals



No. 1053.



No. 1054.

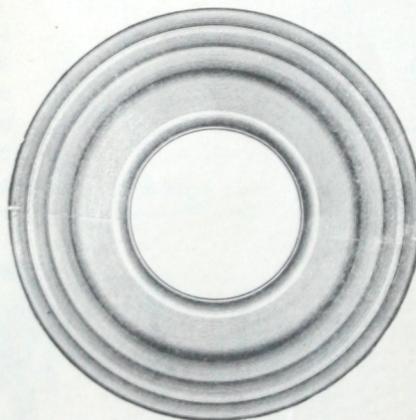
## Holders



1055

Cat. No.	PRICES	Cat. No.	PRICE
1053. Nickel-plated or Bronze, per dozen, . . . . .	\$3 00	1055. Nickel-plated or	
1054. " " " " " . . . . .	3 75	Polished Bronze,	

## Rosettes



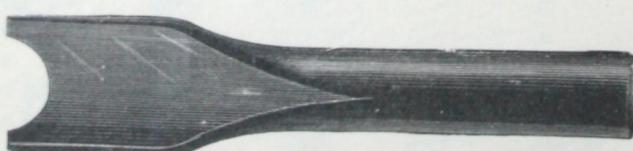
Cat. No.	PRICE
1056. Per dozen, . . . . .	\$ .50

## Flexible Tubing

This Tubing is made of best pure gum rubber, with steel wire spiral spring insertion.



Cat. No.	PRICES
1057. 1 inch Mohair, per foot, . . . . .	\$ .50
1058. 1 " Silk, " " " . . . . .	.75



Cat. No.

Cat. No.	PRICES
1060. Tinned Straps, all sizes, per lb., . . . . .	\$ .40
1061. 1 inch Wrought Iron Pipe Hooks, per 100, . . . . .	1 .25
1062. Staples for 1 or 1 1/4 inch Tubing, per lb., . . . . .	.30

## Accessories

## Staple Drivers

Cat. No.	PRICE
1059. For 1 or 1 1/4 in. Staples, each, . . . . .	\$ .60

## SPEAKING TUBE MATERIAL—Continued

## Tin Speaking Tube, 5 ft. Lengths

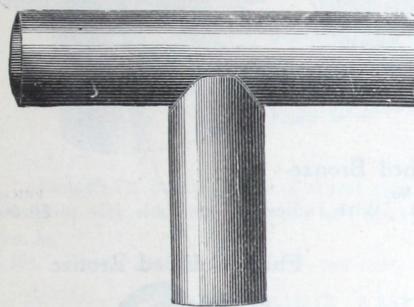


## Cat. No.

		PRICES
1063.	1 inch diameter, per 100 feet,	\$2 50
1064.	1 1/4 " " 100 "	3 60
1065.	1 1/2 " " 100 "	5 00
1066.	2 " " 100 "	7 50

NOTE.—100 feet or under, use 1 inch tube; 100 to 200 feet, use 1 1/4 inch tube; 200 to 400 feet, use 1 1/2 inch tube.

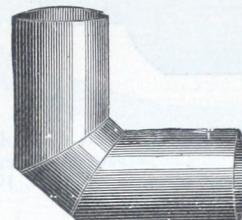
## Tee Joints



## Cat. No.

	PRICES
1067.	1 in., per 100, \$7 50
1068.	1 1/4 " 100, 12 50
1069.	1 1/2 " 100, 20 00
1070.	2 " 100, 25 00

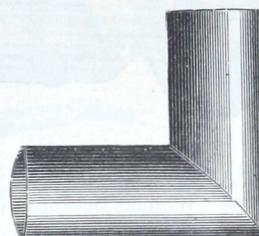
## Hexagonal Elbow



## Cat. No.

	PRICES
1071.	1 in., per 100, \$3 00
1072.	1 1/4 " 100, 5 00
1073.	1 1/2 " 100, 7 50
1074.	2 " 100, 12 50

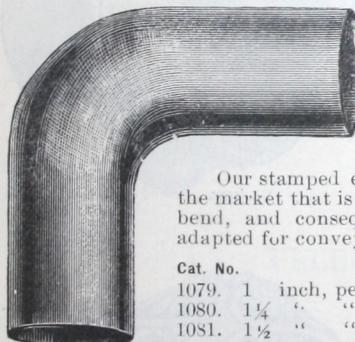
## Square Elbow



## Cat. No.

	PRICES
1075.	1 in., per 100, \$3 00
1076.	1 1/4 " 100, 5 00
1077.	1 1/2 " 100, 7 50
1078.	2 " 100, 12 50

## Obtuse Elbow

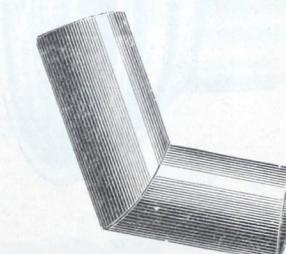


## Round Stamped Elbow

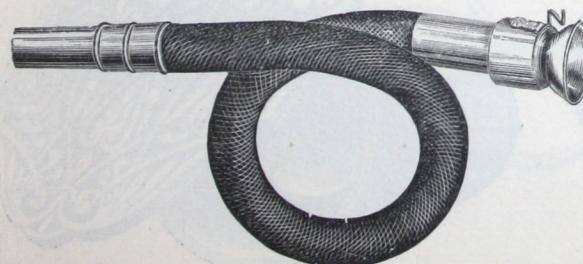
Our stamped elbow is the only one in the market that is perfectly smooth in the bend, and consequently particularly well adapted for conveying the sound.

## Cat. No.

	PRICES
1079.	1 in., per 100, \$ 6 00
1080.	1 1/4 " 100, 10 00
1081.	1 1/2 " 100, 16 00
1082.	2 " 100, 22 00



	PRICES
1083.	1 in., per 100, \$ 2 50
1084.	1 1/4 " 100, 5 00
1085.	1 1/2 " 100, 7 50
1086.	2 " 100, 12 50



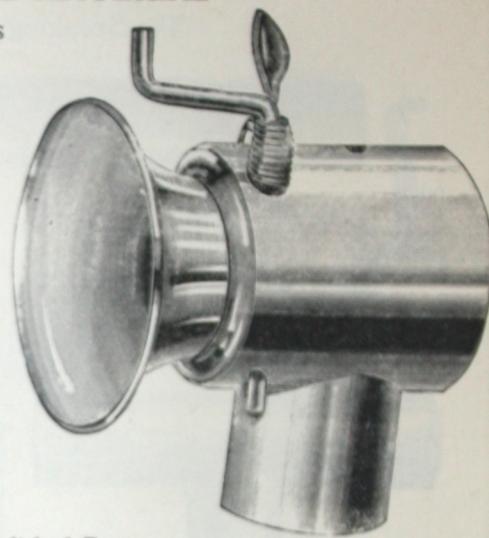
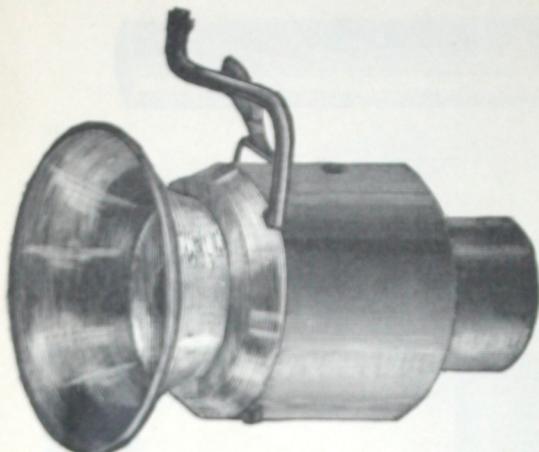
## Flexible Terminals

	PRICES
1087.	2 ft. long, with Whistle, etc., complete, each, \$2 50
1088.	3 ft. long, complete, each, 3 00

Per additional foot, 60 cents.  
Subject to discount.

## SPEAKING TUBE MATERIAL

## Whistles

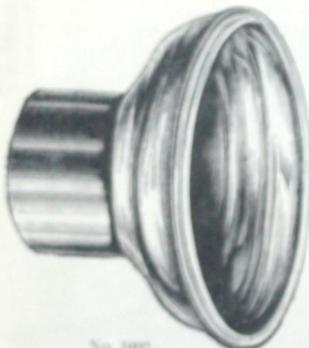


## Nickel Plated or Polished Bronze

Cat. No.	PRICES
1089. With Indicator, per doz., . . .	\$2.75
1090. Without Indicator, per doz., . . .	2.50

Cat. No.	PRICE
1091. With Indicator, per doz., . . .	\$6.00

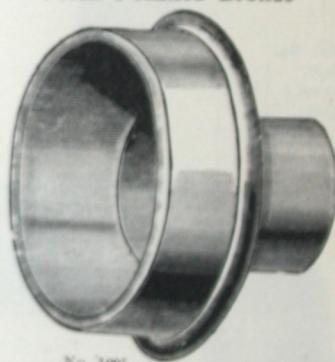
## Round Polished Bronze



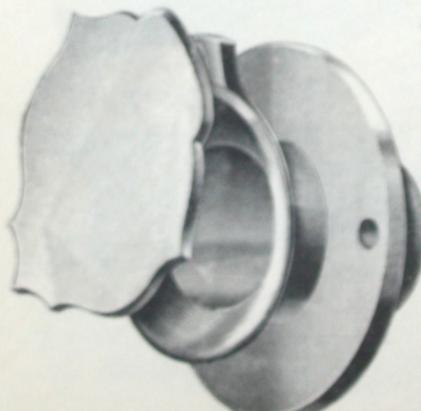
## Open Mouthpiece

Cat. No.	PRICES
1092. Per doz., . . .	\$1.25
1093. Cast Iron, . . .	60
1094. Porcelain, . . .	65
—	—
1095. Per doz., . . .	1.25
1096. Nickel Plated, . . .	1.50

## Flush Polished Bronze



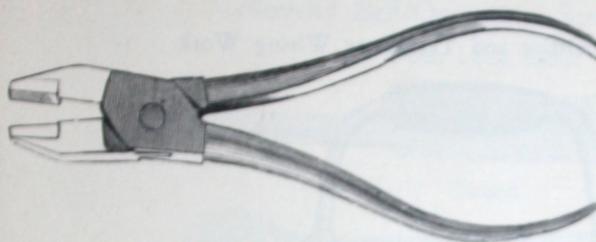
## Covered Mouthpiece



Cat. No.	PRICE
1097. Round, Cast Bronze, each, . . .	\$ .75

Cat. No.	PRICE
1098. Bronze, with Cover, each, . . .	\$ .75

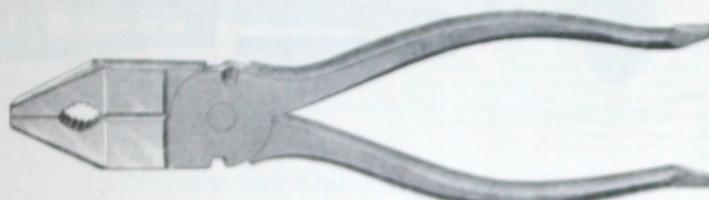
## STUB'S SIDE-CUTTING PLIERS



Cat. No.	PRICES
1099. 4 inch, each,	\$ .90
1100. 5 " "	.90
1101. 6 " "	1.00
1102. 7 " "	1.50
1103. 8 " "	2.00

Nickel Plating, 4, 5 or 6 inch,  
20 cents per pair, net.

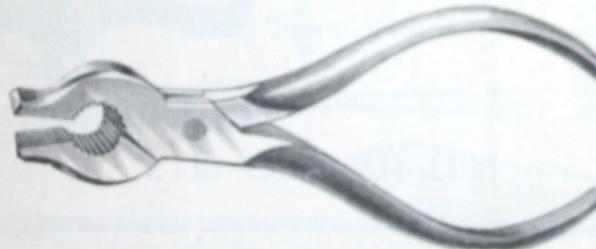
## COMBINATION PLIER



Length 7½ inches, made of finest cast steel, well tempered and finished. Has flat nose and gas plier with side or flush cutter and heavy wire cutter, screw-driver and reamer on end of handle.

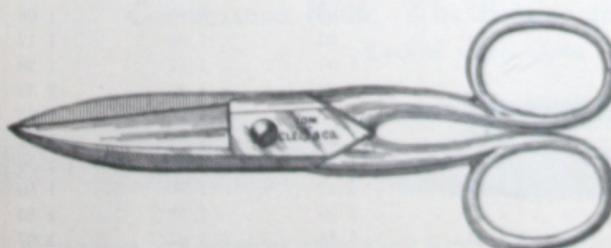
Cat. No.	PRICE
1104. Extra Quality, Cast Steel, per pair,	\$1.50

## BURNER AND FLAT NOSE PLIERS



Cat. No.	PRICES
1105. 5 inch, each,	\$ .75
1106. 7 " "	1.00

## TELEPHONE WIRE SNIPS



Extra Quality Cast Steel.

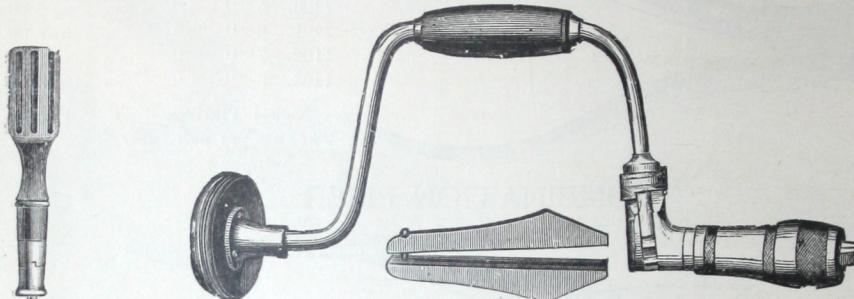
Nickel Plated.

Size, 5½ inches.

Cat. No.	PRICE
1107. Per Pair,	\$1.00

## RATCHET BRACE

For Line, Office and Telephone Wiring Work



## Cat. No.

	PRICES
1108. 12 inch sweep, each, . . . . .	\$3 50
1109. 10 " " " " . . . . .	3 25
1110. 8 " " " " . . . . .	3 00

CABINET  
LOCK FERRULE SCREW  
DRIVER

## Cat. No.

	PRICES
1112. 3½ inch, each, . . . . .	\$ .30
1113. 4½ " " " " . . . . .	40
1114. 5½ " " " " . . . . .	50
1115. 6½ " " " " . . . . .	60
1116. 8½ " " " " . . . . .	70
1117. 10½ " " " " . . . . .	85
1118. 12½ " " " " . . . . .	1 00

## IMPROVED BIT WRENCH

For use where a brace is  
inconvenient

## Cat. No.

	PRICE
1119. Each, . . . . .	\$ .25

## BELL HANGERS' BITS



## LENGTHS.

Cat. No.	12 in.	18 in.	24 in.	30 in.	36 in.
1120. . . . . Size, 6-32 . . . . .	\$ 42 . . . . .	\$ 58 . . . . .	\$ 75 . . . . .	\$ 92 . . . . .	\$1 08 . . . . .
1121. . . . . " 8-32 . . . . .	42 . . . . .	58 . . . . .	75 . . . . .	92 . . . . .	1 08 . . . . .
1122. . . . . " 10-32 . . . . .	46 . . . . .	63 . . . . .	79 . . . . .	1 00 . . . . .	1 08 . . . . .
1123. . . . . " 12-32 . . . . .	50 . . . . .	67 . . . . .	83 . . . . .	1 00 . . . . .	1 08 . . . . .
1124. . . . . " 14-32 . . . . .	58 . . . . .	75 . . . . .	92 . . . . .	1 08 . . . . .	1 17 . . . . .
1125. . . . . " 16-32 . . . . .	67 . . . . .	83 . . . . .	1 00 . . . . .	1 17 . . . . .	1 25 . . . . .
1126. . . . . " 18-32 . . . . .	75 . . . . .	92 . . . . .	1 08 . . . . .	1 25 . . . . .	1 33 . . . . .
1127. . . . . " 20-32 . . . . .	83 . . . . .	1 00 . . . . .	1 17 . . . . .	1 25 . . . . .	1 33 . . . . .
1128. . . . . " 22-32 . . . . .	92 . . . . .	1 08 . . . . .	1 25 . . . . .	1 33 . . . . .	1 42 . . . . .
1129. . . . . " 24-32 . . . . .	1 00 . . . . .	1 17 . . . . .	1 33 . . . . .	1 42 . . . . .	1 50 . . . . .
1130. . . . . " 26-32 . . . . .	1 08 . . . . .	1 25 . . . . .	1 42 . . . . .	1 50 . . . . .	1 50 . . . . .
1131. . . . . " 28-32 . . . . .	1 17 . . . . .	1 33 . . . . .	1 50 . . . . .	1 58 . . . . .	1 58 . . . . .
1132. . . . . " 30-32 . . . . .	1 25 . . . . .	1 42 . . . . .	1 58 . . . . .	1 67 . . . . .	1 67 . . . . .
1133. . . . . " 32-32 . . . . .	1 33 . . . . .	1 50 . . . . .	1 67 . . . . .	1 67 . . . . .	1 67 . . . . .

Intermediate sizes at same prices as next larger size.

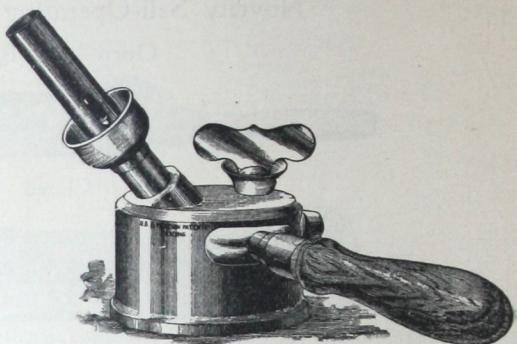


## TORCHES

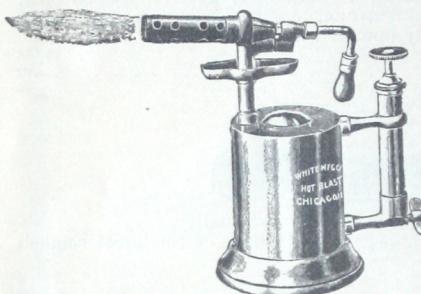
## The "Vulcan" Gasoline Torch

For all ordinary work this torch will give satisfactory service. Used extensively by all classes of mechanics who require in their work gasoline torches.

Cat. No. 1138. Each, . . . . . PRICE \$4 00



Size of Reservoir,  $2 \times 3\frac{1}{8}$  inches.



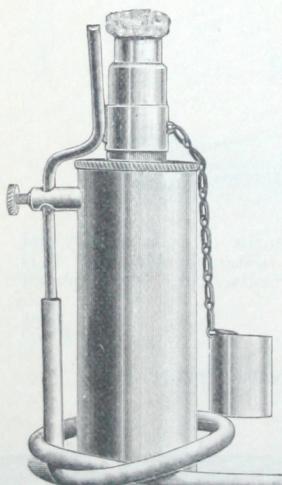
Size of Reservoir,  $3\frac{1}{8} \times 4\frac{1}{8}$  inches.

## The "White" Gasoline Torch

Is made in first-class style and very strong, notwithstanding its light weight. Specially adapted to the purpose of linemen and electricians.

Will not blow out and will burn in any position.

Cat. No. 1139. Each, . . . . . PRICE \$5 00



Size,  $1\frac{1}{2} \times 6\frac{1}{2}$  inches.

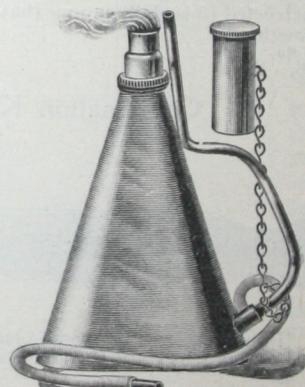
## The "Victor" Alcohol Torch

Is adapted for soldering small work or where unusual care is required. A blow-pipe is furnished which can be adjusted to give any shape of flame desired.

Cat. No. 1140. Each, . . . . . PRICE \$2 00

## Galloway Alcohol Lamp

Furnished Complete  
with Blow Pipe

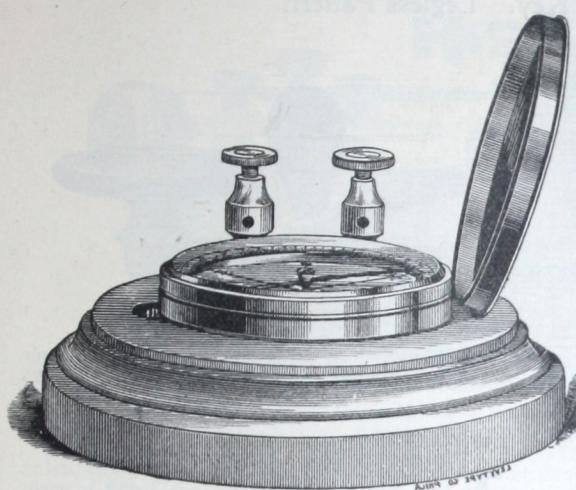


Cat. No. 1141. Each, . . . . . PRICE \$2 00

## GALVANOMETERS

## Detector Galvanometer

## Pocket Galvanometer



## Cat. No.

1142. Detector Galvanometer, . . . . . \$4 00  
 1143. Pocket " case of Hard Rubber and Metal, Nickel-plated, . . . . . 4 00

## WARNER ELECTRIC GAUGE



## Cat. No.

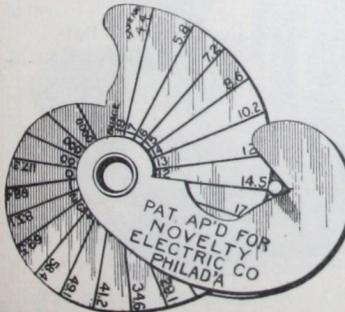
1144. Warner Gauge, Nickel Plated, . . . . . \$9 00  
 1145. 0 to 36, . . . . . 4 00  
 1146. 5 to 36, . . . . . 3 00

## NOVELTY WIRE GAUGE

These cuts represent in full size the two sides of our recently perfected *Pocket Wire Gauge*. It is finely finished and graduated with extreme accuracy.

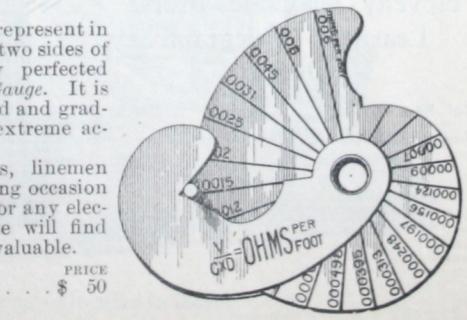
Electricians, linemen and all having occasion to use wire for any electrical purpose will find this gauge invaluable.

Cat. No. PRICE  
 1147. Each, . . . . . \$ .50



Front.

Full size.



Back.

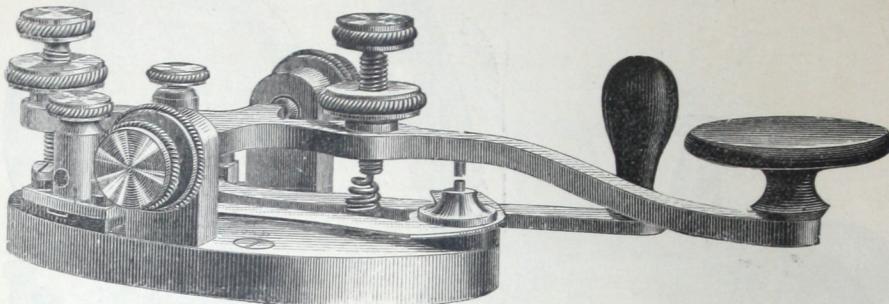
## AMERICAN GAUGE

Measures wires sizes 0 to 36.



## TELEGRAPH INSTRUMENTS, ETC.

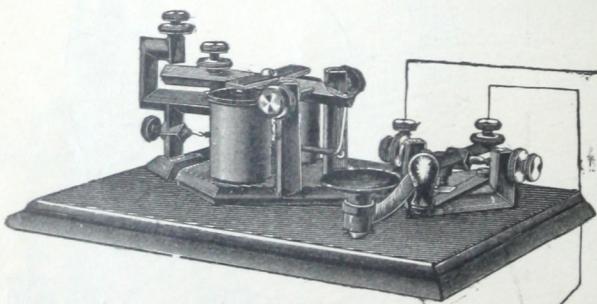
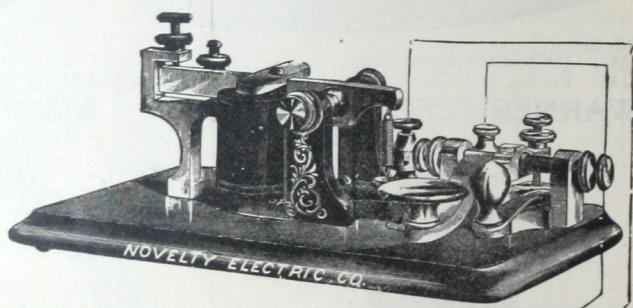
### Steel Lever Key. Legless Pattern



Cat. No.	PRICE
1148. Each, . . . . .	\$2.25

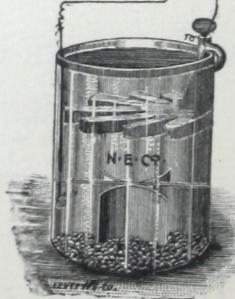
## Learners' Instruments

These are full sized, well made Instruments. The magnets are strong. The sounders are loud and clear.



Novelty Diamond Morse  
Learners' Telegraph  
Outfit

Cat. No. PRICE  
1149. Complete with Battery  
and wire, . . . . . \$2 75

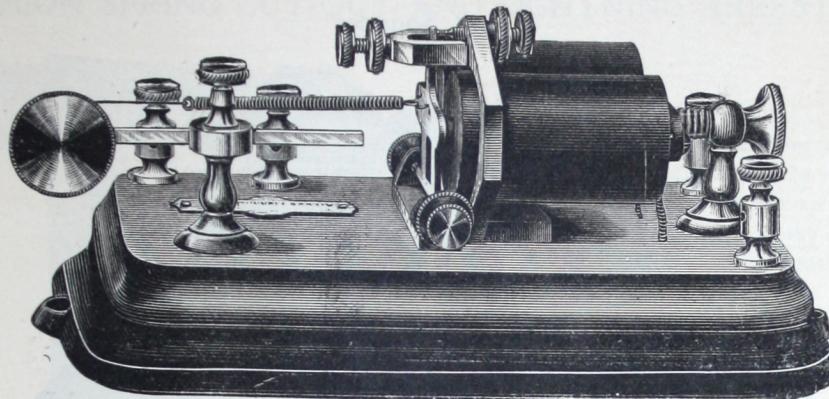


### Learners' Instrument

Cat. No. PRICE  
1150. Complete with Bat-  
tery and wire. \$3.75

## TELEGRAPH INSTRUMENTS, ETC.—Continued

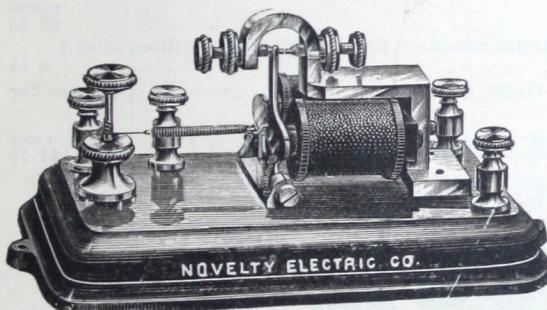
### Main Line Relays



1250 ohms resistance, Silk Covered Wire, Polished Rubber Covered Coils, Mahogany Base, Mounted on Ornamental Surbase, Extension Adjustment.

In addition to the excellent merits of these Relays in all the usual details of construction and finish, their especial advantage consists in the armature and lever, which is all struck from a single piece of finest iron, thus giving to that part greater strength and firmness, and at the same time the advantage of being very light. The result is, this Relay is the most sensitive yet produced.

Cat. No.	PRICES
1151. 150 ohms resistance, . . . . .	\$7 00
1152. 200 " " . . . . .	7 50
1153. 300 " " . . . . .	8 00



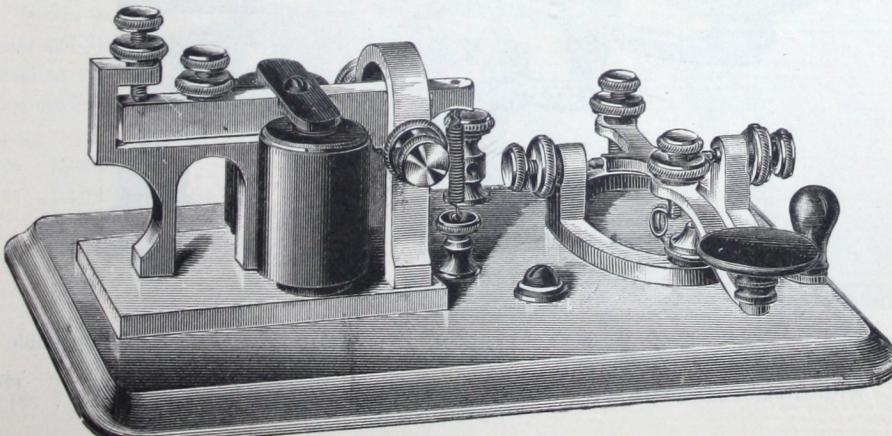
Size of Base, 6½ in. long, 3½ in. wide.

### New Form Pony Relays

For lines of less than 75 miles in length. Elegantly finished, mounted on polished Mahogany Base, with Ornamental Surbase, as shown.

Cat. No.	PRICES
1154. Wound to 20 ohms resistance, for lines up to 15 miles in length, . . . . .	\$3 50
1155. 40 or 50 ohms, for lines 20 to 40 miles, . . . . .	4 00
1156. 50 to 100 ohms, for lines of from 40 to 75 miles, . . . . .	4 50

### Giant Sounder and Steel Lever Key

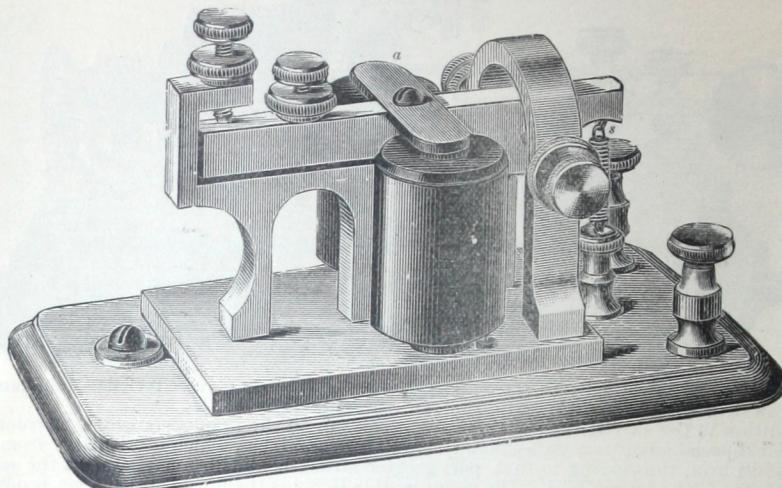


For private lines, city wires, and all short lines up to 15 miles in length.

Cat. No.	PRICE
1157. 20 ohms resistance, . . . . .	\$4 50

## TELEGRAPH INSTRUMENTS, ETC.—Continued

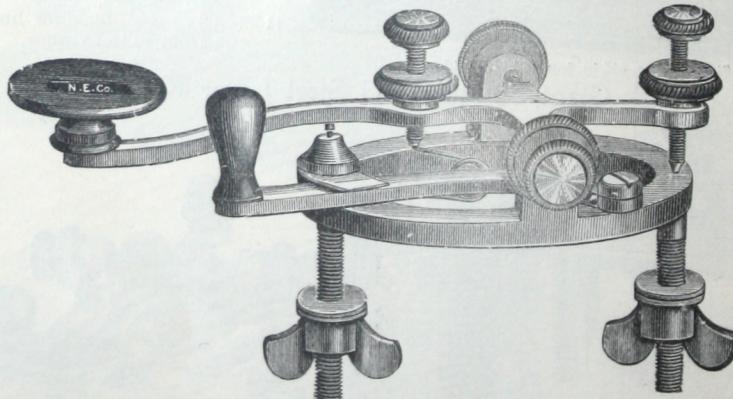
## Giant Sounder



The original Giant Sounder, as shown above, is now recognized as the best standard of excellence in sounders. It gives a loud clear sound with half the amount of local battery generally required.

Cat. No.	PRICES
1158. 3 Ohms, . . . . .	\$2 25
1159. Sounders wound with fine wire to 20 Ohms resistance for Main Line use (without relay,) on lines up to 15 miles in length, . . . . .	2 75
We also make a cheaper grade of Giant Sounders of the same general appearance for Students, Amateurs and Short Lines.	
Cat. No.	PRICE
1160. With Rubber Covered Coils, . . . . .	\$1 75

Steel Lever Solid Trunnion Key  
Leg Pattern

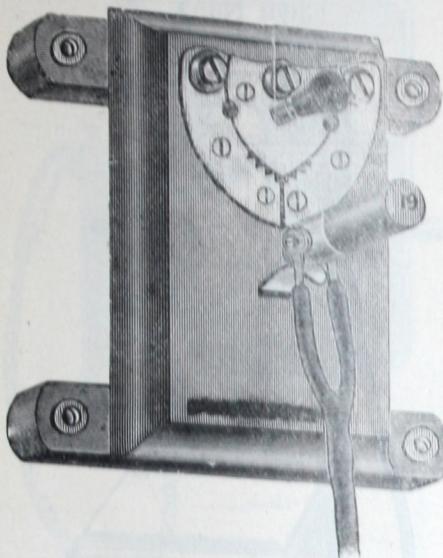


Patented February 15th, 1881.

The size and proportions are such as to make it the most perfect operating key possible to obtain, either for the hand of the expert, or the beginner.

Cat. No.	PRICE
1161. With Straight or Curved Lever, . . . . .	\$1 75

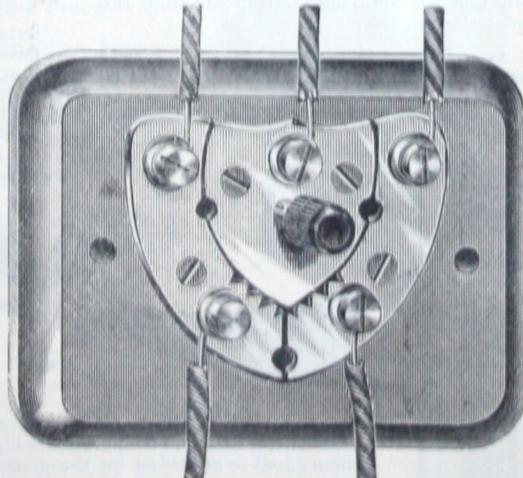
## UNION SPRING CUT-OUT AND LIGHTNING ARRESTER



This adaptation of our patent spring jack fills the place in telegraphic apparatus of the old form known as plug switch, and is the best spring cut-out for city "branch offices" or "way offices," where it is not required at any time to make cross connections of wires or other changes besides simple changing instruments from one line to another with plug and cord.

Cat. No.	PRICES
1162. One-Line, without plug and cord, . . . . .	\$2 00
1163. Two-Line, " " " " . . . . .	4 00
1164. Three-Line, " " " " . . . . .	6 00
1165. Plugs with 3 ft. cord attached, each, . . . . .	1 25

## UNION LIGHTNING ARRESTER AND GROUND WIRE SWITCH



Serves as Peg Cut-Out, Lightning Arrester and Ground Wire Switch. It is an excellent and cheap form for amateur and all short lines.

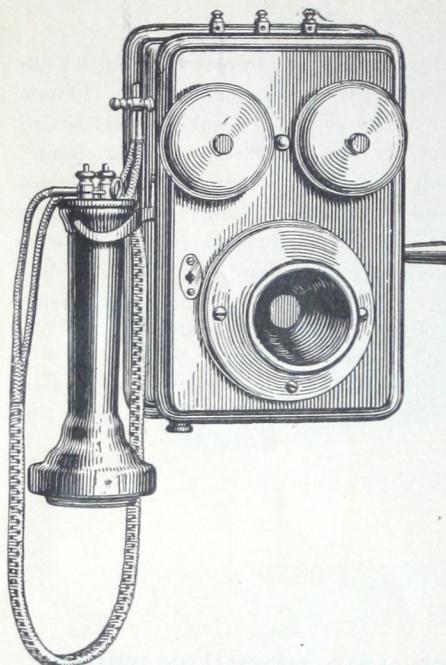
Cat. No.	PRICES
1166. Each, . . . . .	\$ .80
1167. Extra Pegs, each, . . . . .	20

For all other Lightning Arresters see "TELEPHONES."

## TELEPHONES

## Combination Blake Set

Style No. 1

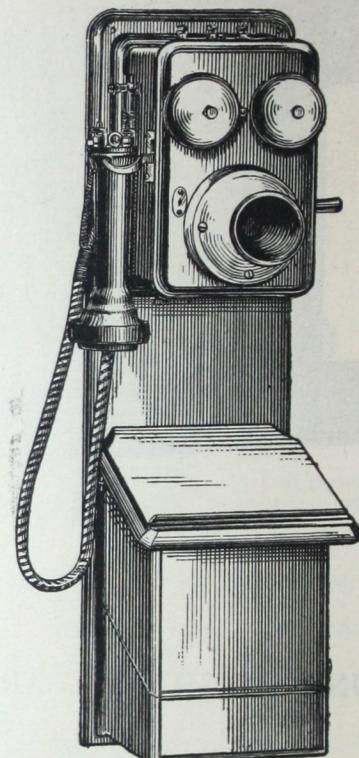


This instrument is constructed the same as No. 2, only it has no back base and battery box. The battery can be placed at any convenient point and wired to the instruments from the top of the bell box.

Cat. No.

1168. Each, . . . . . \$14 00

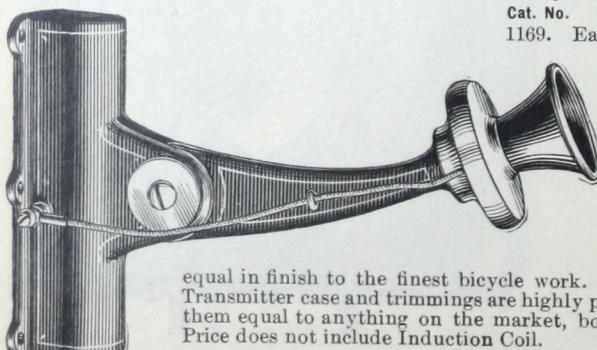
Style No. 2



Same construction as No. 3, with this difference, the Transmitter is mounted on the face of the Magneto Bell Box instead of being in a separate case, to avoid all hollow sounds which occur by having Transmitters placed inside Magneto Bell Boxes. Can be used same as Style No. 3.

Cat. No.

1169. Each, . . . . . \$15 50



equal in finish to the finest bicycle work. They are hand decorated, and the Transmitter case and trimmings are highly polished and nickelated. We guarantee them equal to anything on the market, both in speaking qualities and finish. Price does not include Induction Coil.

Cat. No.

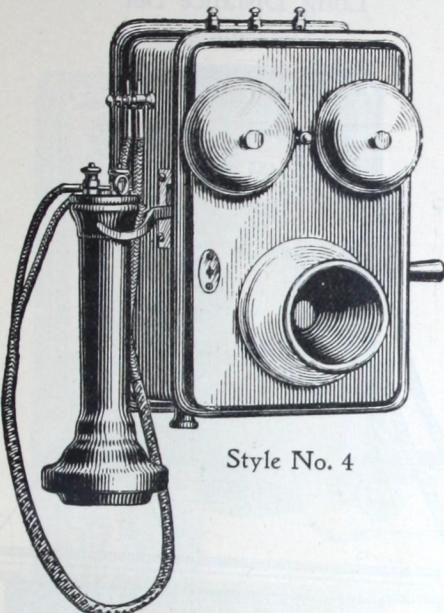
1170. Each, . . . . . \$7 00

## No 14. Long Distance Transmitter and Arm

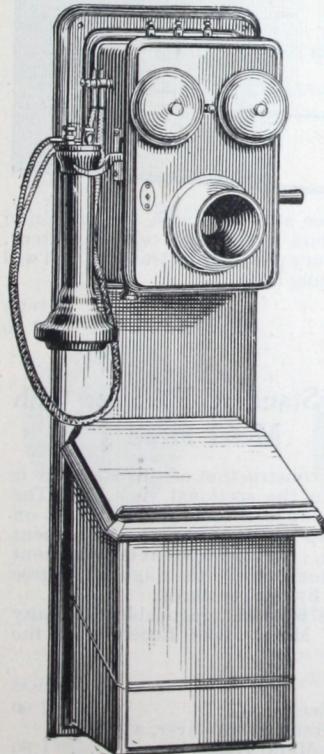
(Patent Applied for)

This is our Improved Transmitter, mounted on a finely enameled adjustable arm, treated with two coats of enamel baked, and are

## TELEPHONES—Continued



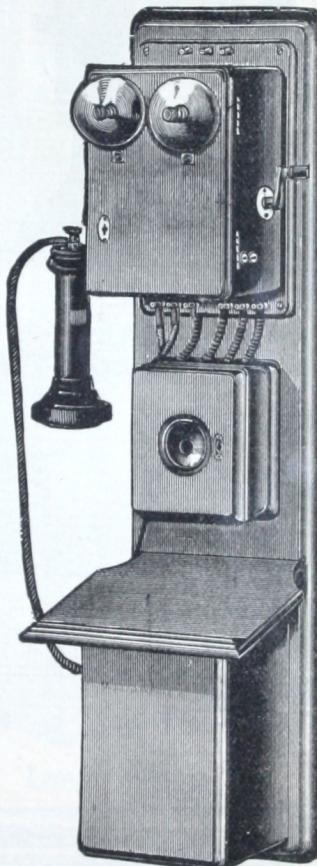
Style No. 4



Style No. 5  
Combination Long  
Distance Set

This instrument is the same as No. 4, mounted on back base with one instead of a two cell battery box.

**Cat. No.** PRICING  
1173. Each, . . . . . \$18 00



Style No. 3

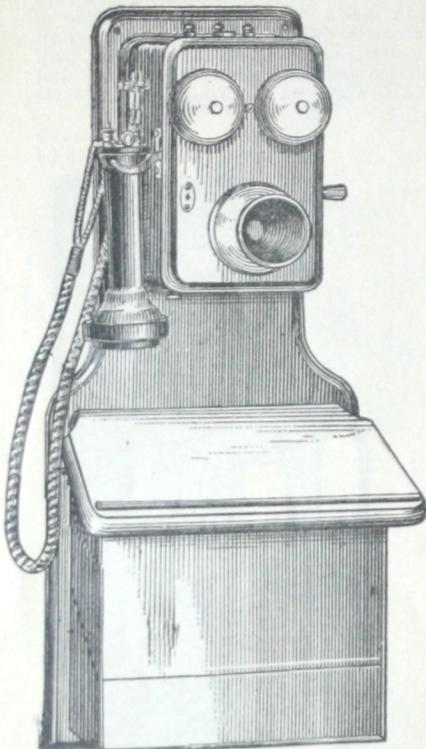
### A Standard Blake Set

It is composed of Standard Magneto Bells to ring through 10,000 Ohms resistance, Blake Transmitter, Standard Receiver with cord, and Automatic Switch. All mounted on back base with battery box. Will work perfect on lines up to one hundred miles; and results obtained on shorter lines are more satisfactory than many other forms of Carbon Transmitters. This Instrument is guaranteed to give good service for Private or Exchange use.

Cat. No. 1171. Each Instrument complete, . . . . . \$16 00

## TELEPHONES—Continued

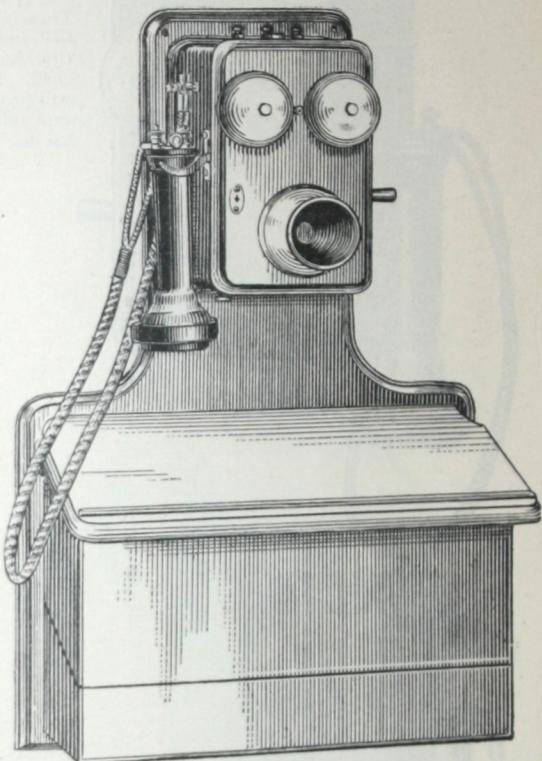
Combination Long Distance Set  
Style No. 6



This is also our No. 4 Instrument mounted on back base with two cell battery box. This Telephone is intended for all round use, particularly for exchange work.

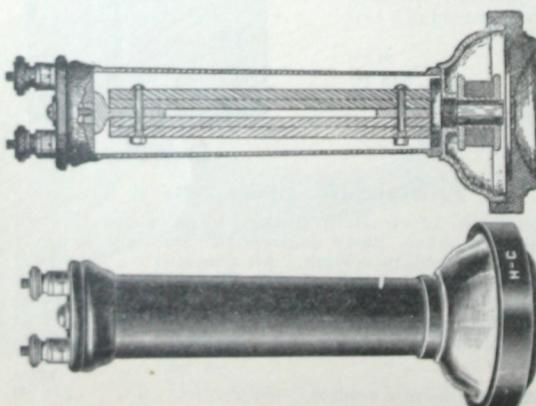
Cat. No. 1174. Each, . . . . . PRICE \$18 50

Long Distance Set  
Style No. 7



This is the same as No. 6, with the exception that the battery box holds three cells of battery, which makes it a very powerful instrument, and will transmit on very long lines.

Cat. No. 1175. Each, . . . . . PRICE \$18 80



### H. C. Standard Receiver with Metal Head

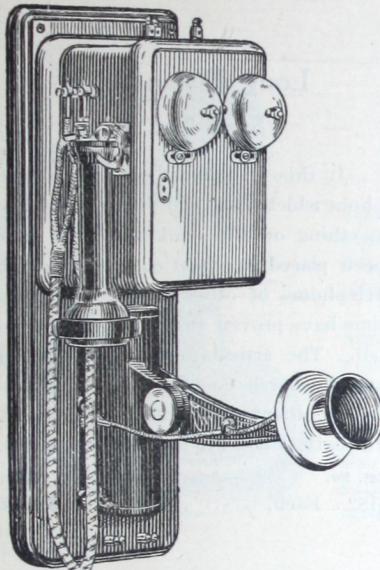
The construction of this Receiver is shown in the sectional view cut. The head or cup is of metal, and screwed on to the tip which carries the permanent magnets. The adjustment is permanent and is not even in the slightest degree affected by temperatures.

This is more practicable than any form of Metal Head Receiver on the market.

Cat. No.	PRICES
1176. Each, . . . . .	\$2 00
1177. Standard Receiver, without Metal Head, . . . . .	1 80

## TELEPHONES—Continued

Style No. 8

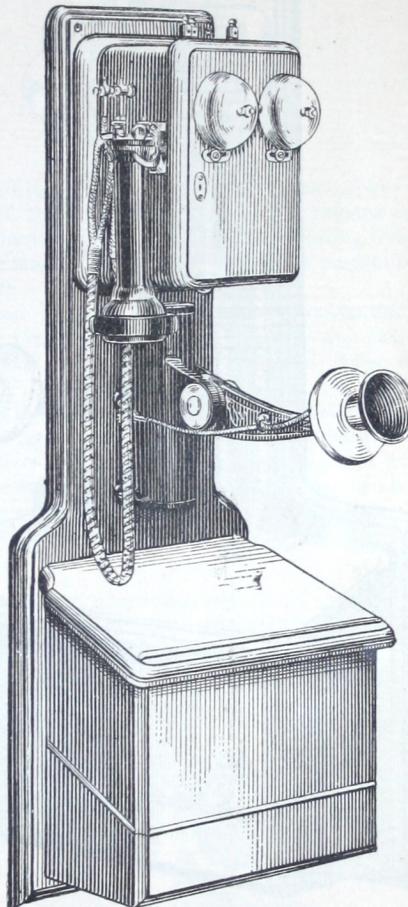


## Long Distance Set

This instrument is the same as Nos. 9 and 10, excepting that it has no Battery Box. The Battery can be placed at any convenient point and wired to the Instrument.

Cat. No. 1178. Each Instrument, . . . . . PRICE \$23 00

Style No. 9



## Long Distance Set

This instrument is the same as No. 10, excepting that it has a Two Cell instead of a Three Cell Battery Box.

Cat. No. 1179. Each Instrument, . . . . . PRICE \$24 00

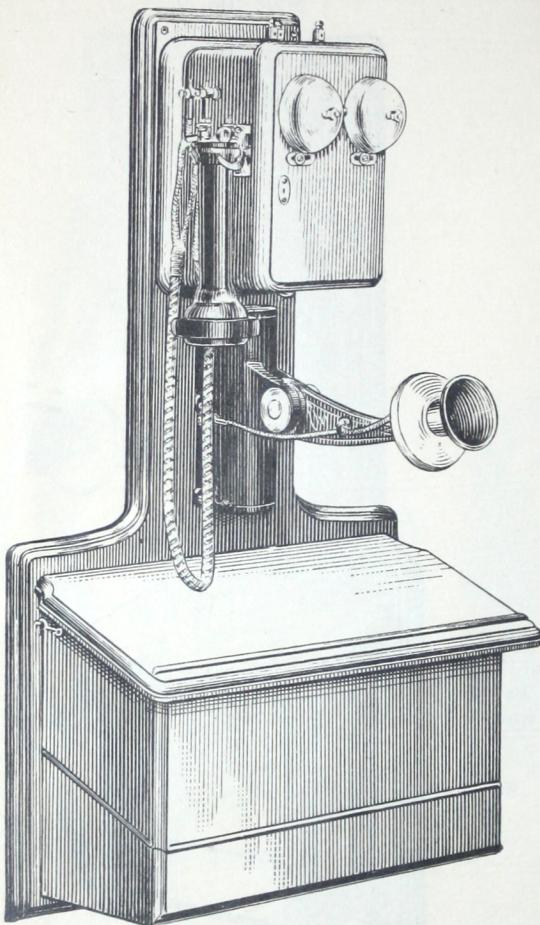


## Watch Case Receiver, with and without Handle

These are a very high grade of Receiver and are manufactured of hard rubber of the best quality. They are both handy and convenient to use.

Cat. No.	PRICES
1180. Each, with handle, . . . . .	\$2 50
1181. " without " . . . . .	1 50

## TELEPHONES—Continued

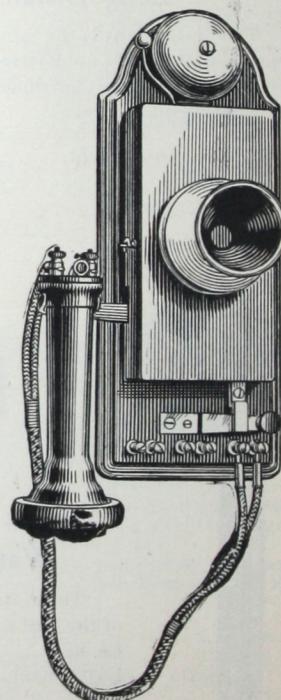


## Long Distance Set

## Style No. 10

In this instrument we offer a Telephone which a test will prove superior to anything on the market. They have been placed in direct competition with Telephones of other makes, and every time have proven superior in every detail. The articulation is much better and the harsh metallic ring, so noticeable in other makes, is entirely obviated. The battery box will hold three batteries.

Cat. No. . . . . PRICE  
1182. Each, . . . . . \$24 50



## Electric Call Bell Set

## Style No. 11

Instrument is composed of a Long Distance Transmitter, Standard Receiver, Automatic Switch, Push Button and Electric Bell for Battery Call. The Batteries operate the Call Bell and one of the same operates the Transmitter when in use. All mounted on one Back-base, and only requires two wires from one Instrument to the other. It is simply constructed and well adapted for interior use.

Cat. No. . . . . PRICE  
1183. Per Instrument, list, . . . . . \$12 00

## Telephone Cords

Cat. No.	PRICES
1184. 3 feet, Worsted, each,	\$ .25
1185. 3 " Silk, "	40

## TELEPHONES—Continued



## Desk Set

## Style No. 12

We have devised the Desk Set shown in the accompanying illustration to fill the demand for the various systems of wiring now used, particularly the Inter-communicating System, the base being large so as to carry the switch, push-button, buzzer, coil, etc.

This set is fitted with our Long Distance Transmitter, Automatic Switch, Compound Magnet Receiver, and silk wound Induction Coil. The metal work is highly polished and nickel-plated.

We also furnish this Instrument with a small metal base, nickel-plated, when large base is not wanted, this base will also carry push, buzzer and coil, but is not large enough for switching device for Inter-communicating Systems, but can be used for them when switch is mounted on separate base.

## Cat. No.

	PRICE
1186. Each, . . . . .	\$14 00
1187. Buzzer and Pushbutton, mounted on base of Desk Phone, additional, net, . . . . .	75
1188. Lever Switches, mounted on base of Desk Phone, or on separate base, first point, net, . . . . .	35
Each additional point, net, . . . . .	20

## Desk Set

This Set has a number of new and desirable features which will commend it to those desiring a superior desk phone. It is heavily nickel-plated, but can be finished in polished brass or oxidized copper at a slight advance in price.

The base is of sufficient weight to give stability to the instrument. The switch is a new design, and located in the base. The head is adjustable, and made so that any ordinary transmitter can be easily attached.

Provision is made for wires passing down the tube without liability of their coming in contact with switch or working parts.

This instrument should not be confounded with the cheap inferior desk sets upon the market. Is composed of our long distance transmitter, standard receiver and coil.

Cat. No.	PRICE
1189. Complete, with Cord, . . . . .	\$20 00



## NESS AUTOMATIC INTER-COMMUNICATING TELEPHONE SWITCH

Patented

The great drawback to the more general use of the inter-communicating telephone system has been in a large measure due to a lack in the instruments, and the trouble incidental to the employment of a manual switch which required to be returned to its normal position by hand after each call. The constant omission on the part of one or other of those using the instruments resulted in unsatisfactory service.

The "Ness" Automatic Switch entirely overcomes this trouble, as it is arranged so that the replacing of the receiver upon the hook causes the switch to fly back to its own point.

To call up, the switch lever is simply turned around until it rests upon the point of connection with the instrument it is desired to call. A slight pressure upon the switch knob rings up the bell of such instrument, and when the conversation is finished the replacing of the receiver returns the switch to its own point. It is not necessary to first remove the receiver in this system before making a call.

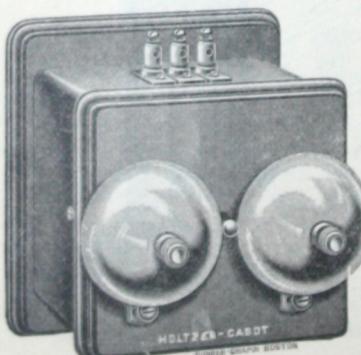
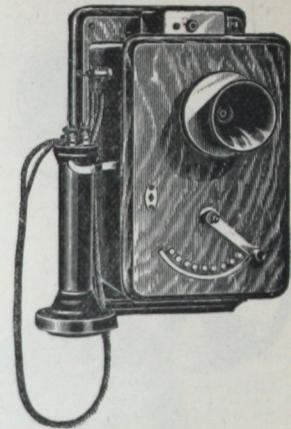
This switch is well constructed mechanically, and all the working parts which are liable to wear are of "Stubbs" steel and case hardened.

The hook and all the switch connections are mounted upon the door and provision is made for placing the induction coil and transmitter upon it also. The connections are all cabled across to the bottom of the box. This permits opening the instrument up without disconnecting or disarranging any of the parts.

The smallest size made is a 10 point, which, of course, will answer for any less number. If only six instruments are wanted, the other 4 points will be available at any future time. The next size is a 16 point.

We also furnish these instruments with backboards, transmitters and battery boxes, where desired, and arranged as desk sets also, (prices upon application.)

Cat. No.	PRICES
1190. 10 point Switch in Box with hook, . . . . .	\$ 8 50
1191. 16 " " " " "	10 00



## EXTENSION BELLS

Complete in Oak or Walnut Boxes

Cat. No.	Resistance.	PRICES
1192. 80 Ohms Pony, . . . . .		\$2 50
1193. 80 " Standard, . . . . .		3 00
1194. 160 " " . . . . .		3 50
1195. 500 " Bridging, . . . . .		4 00
1196. 1000 " " . . . . .		5 00
1197. 1600 " " . . . . .		6 00

## LONG DISTANCE TRANSMITTER

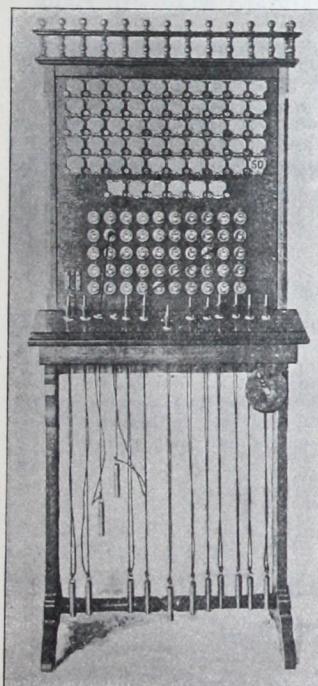
In nickel case, manufactured under letters patented No. 573,356, issued December 15, 1896.

In presenting our improved granular carbon Transmitter to our patrons, we wish to state that after over two years of constant service, they have proven themselves the best transmitters, without a single exception, of anything now made for the following reasons: Simplicity in construction; absolutely no adjustment required; least effected by induction; indestructability. The granular form of transmitter is conceded to be the best for all work, but as this style has heretofore been rendered inefficient by packing or caking of the granular carbon, its general adoption has been prohibited. It has remained for us to devise a transmitter with all the advantages of the granular carbon form, with the packing disadvantage entirely eliminated.

We have instruments fitted with this transmitter in constant operation in some very noisy factories, subjected to a steady jar, but their efficiency has not decreased in the least, even under these trying conditions. We guarantee this transmitter to carry as much current, without breaking, as any other transmitter sold. It also is very efficient when but small battery power is used.

Cat. No.	PRICE
1198. Each, . . . . .	\$4 00

## Central Station Switch Boards



## Inter-Communicating Telephone System for Interior Use

1. It is the only system that insures thorough connection between departments.

2. No exchange is required, each instrument having its own switchboard.

3. Instant communication is at once procured with the instrument required by turning the switch to the desired number.

4. The lines can be used by more than two persons at one time, for instance: with a system of nine instruments, numbers one and three, two and eight, four and nine, five and seven, can converse at the same time.

5. To effect such flexible service as above described, would necessitate, in a speaking-tube system of nine stations, no less than eighty-one different tubes. In other words there would be required nine outlets at each desk or station. It may be arranged so that certain station only can call a given station, although said station is in such relation to the system as to permit calling each and all of the others.

For example: the General Manager would not wish to be called by any except superintendents or heads of departments.

Heads of departments would not wish to be called by certain other stations. Yet an emergency might arise when either would have occasion to communicate with some one of them. It may be so arranged. Estimates on same furnished on application.

Cat. No.	PRICES
1199. Per Drop, Grounded Circuit, . . . . .	\$5 50
1200. Per Drop, Metallic Circuit, . . . . .	6 00

This does not include Central Station Phone. Prices upon application, according to the way it is to be assembled.

## MAGNETO BELLS

## Pony Magneto Bells

(Without Hook)

Cat. No.	PRICE
1201. 5000 ohms, each, . . . . .	\$5 50

## Standard Magneto Bells

(Without Hook)

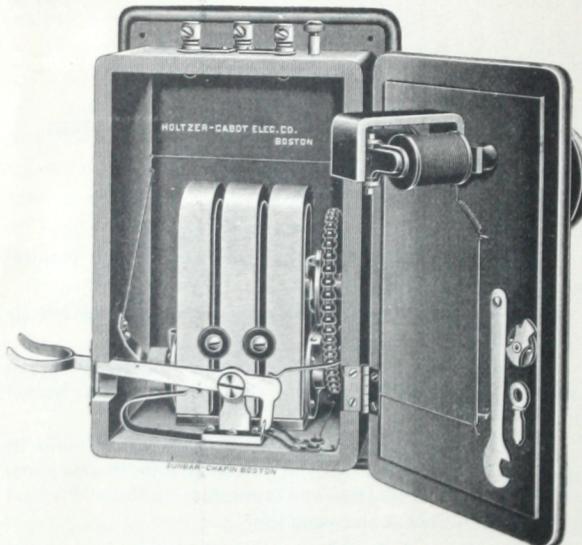
Cat. No.	PRICES
1202. 10,000 ohms, each, . . . . .	\$6 50
1203. 15,000 " " . . . . .	7 00
1204. 20,000 " " . . . . .	7 50



## Standard Magneto Bells

Complete, with Long Lever Automatic Hook, and all wired up ready to be placed upon telephone backboard, with six binding posts on bottom for Receiver, Induction Coil and Battery.

Cat. No.	PRICES
1205. 10,000 ohms, each, . . . . .	\$7 50
1206. 15,000 " " . . . . .	8 00
1207. 20,000 " " . . . . .	8 50



## Cat. No.

1208. 10,000 ohms, each, . . . . .	PRICES
1209. 15,000 " " . . . . .	\$7 50
1210. 20,000 " " . . . . .	8 00

## Standard Magneto Bells

Complete, with Automatic Hook, and wired up for mounting transmitter on cover. These Bells have four hinges and four binding posts on bottom for Receiver and Battery connections for Induction Coil are arranged above the Generator.

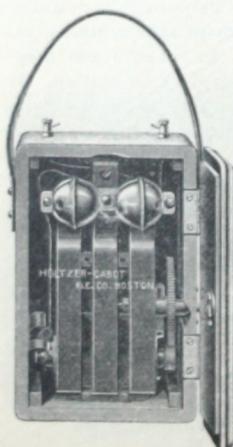
Cat. No.	PRICES
1208. 10,000 ohms, each, . . . . .	\$7 50
1209. 15,000 " " . . . . .	8 00
1210. 20,000 " " . . . . .	8 50

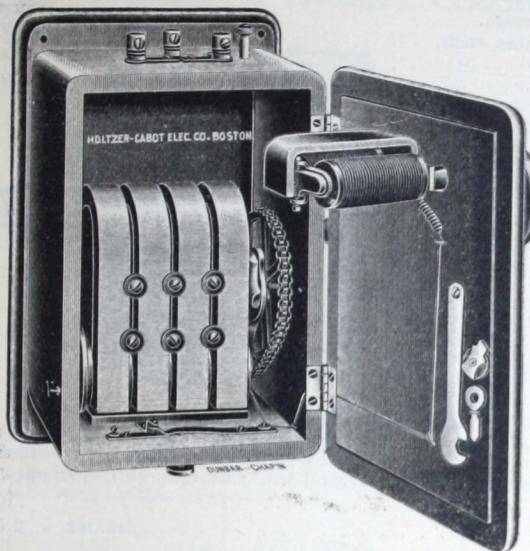
## TESTING GENERATORS

10,000 to 50,000 Ohms

Substantially built for linemen's use, and provided with strap for carrying. Ringing resistance is plainly marked on each instrument.

Cat. No.	PRICES
1211. 10,000 ohms, . . . . .	\$ 7 50
1212. 15,000 " " . . . . .	8 00
1213. 25,000 " " . . . . .	9 00
1214. 35,000 " " . . . . .	10 00
1215. 40,000 " " . . . . .	11 00
1216. 50,000 " " . . . . .	12 00



THE STANDARD  
BRIDGING BELLS

Bridging Bell Parts

## Cat. No.

	PRICES
1219. 4 Magnet Generator, each, . . . . .	\$6 00
1220. 1000 Ohm Ringer, each, . . . . .	4 50
1221. 1600 " " " . . . . .	5 50

## Bridging Bells

Complete with Automatic Hook and wired up to six binding posts on bottom of base.

## Cat. No. Ringer Resistance.

	PRICES
1222. 1000 Ohms, each, . . . . .	\$12 00
1223. 1600 " " " . . . . .	13 00

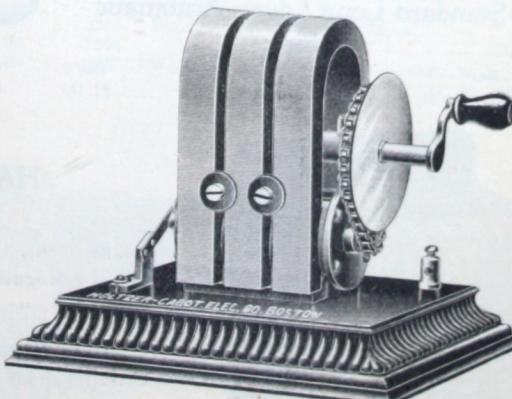
## HAND GENERATORS

Mounted on Wood Bases

Cat. No.	Size.	PRICES
1224. 3 Magnets, each, . . . . .	\$5 00	
1225. 4 " " " . . . . .	7 00	

The permanent magnets of our Hand Generators are elegantly finished, and trimmings are nickel-plated.

When these Generators are to be mounted under desks or on switchboards in *inverted position*, this should be stated in ordering same, so that oil-holes may be placed in proper position.

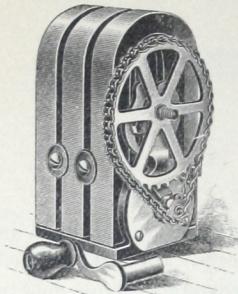


## MAGNETO BELL PARTS

## Standard Generators

Cat. No. Rings Through.

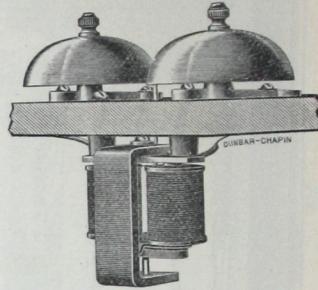
	PRICES
1226. 10,000 Ohms, each,	\$3 50
1227. 15,000 " "	4 00
1228. 20,000 " "	4 50



## Standard Ringers

Cat. No. Resistance.

	PRICES
1229. 80 Ohms, each,	\$2 00
1230. 160 " "	2 50
1231. 500 " "	3 00

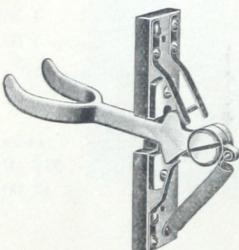


Cat. No. Resistance.

	PRICES
1232. 80 Ohms, each,	\$1 50
1233. 160 " "	2 00
1234. 500 " "	2 50

Cat. No.

	PRICE
1235. Each,	\$ 30



## Lightning Arrester



## Standard Short Lever, Automatic Hook

Cat. No.

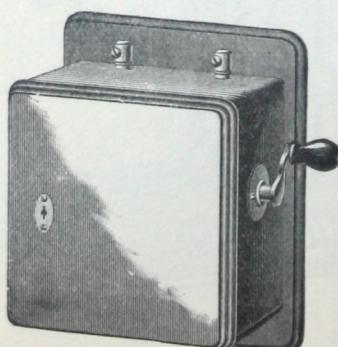
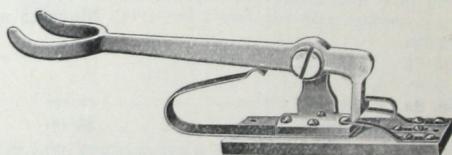
	PRICE
1236. Each,	\$ 85

This hook is usually placed in the upper corner of the Magneto Bell Box. It has knife-edged contacts, a positive action, and is a thoroughly reliable switch.

## Standard Long Lever, Automatic Hook

Cat. No.

	PRICE
1237. Each,	\$1 00



## HAND GENERATORS

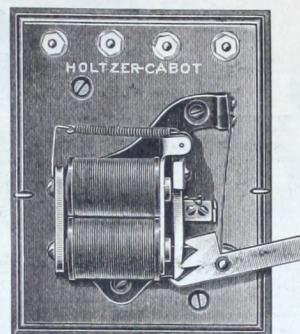
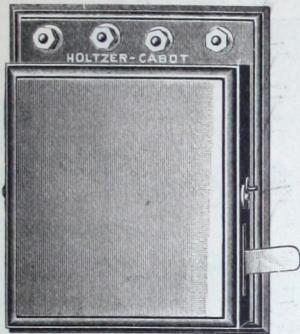
## In Oak or Walnut Boxes

Cat. No. Size.

	PRICES
1238. 3 Magnet, each,	\$5 00
1239. 4 " "	7 00

Our 3 Magnet Hand Generators are suitable for Desk Sets and small switchboards. The 4 Magnet size is recommended for larger switchboards and for bridging work.

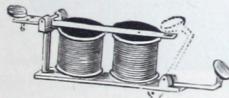
## MAGNETO CIRCUIT CLOSING ATTACHMENT



In many places the ordinary Magneto and Extension Bells do not ring long or loud enough to be heard; especially is this true in noisy factories. In such cases this attachment will be found valuable. It is arranged to close a local circuit and ring a vibrating electric bell until reset, which is done by simply depressing the lever. In place of one, several bells located at different points may be rung by this means.

## Cat. No.

	PRICES
1240. 80 Ohms Resistance, . . . . .	\$2 00
1241. 1000 " " " . . . . .	3 50

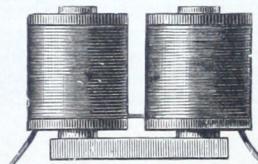
MAGNETO  
ANNUNCIATOR DROP

Handsome finish, metal parts nickel-plated. Very sensitive, never fails to operate. Made to indicate calls on Telephone or other lines where Magneto Signal Bells are used.

## Cat. No.

	PRICES
1242. Without Base, each, . . . . .	\$2 00
1243. With Base and Local, each, . . . . .	3 00

## ELECTRO MAGNETS



## Cat. No.

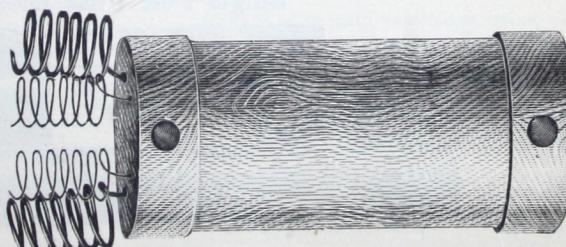
	PRICES
1244. Sounder and Pony Relay, size, 5 to 20 Ohms, . . . . .	\$2 00
1245. Relay Sizes, 50 to 100 Ohms, . . . . .	2 25
1246. " " 100 " 150 " . . . . .	2 50
1247. Magnets for Bells, etc., . . . . .	50c. to 1 00

TELEPHONE  
INDUCTION COIL

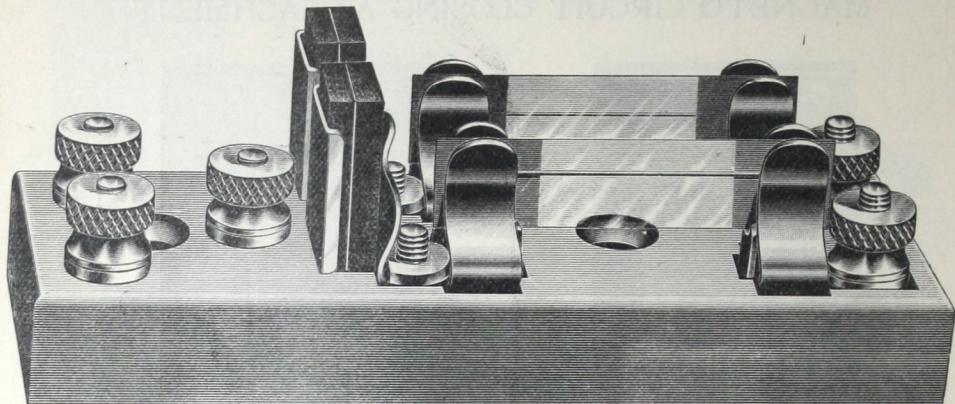
Cut represents 250 Ohms Coil. Full size.

## Cat. No.

	PRICES
1248. 250 Ohms, each, . . . . .	\$1 00
1249. 300 " " " . . . . .	2 00



**LIGHTNING ARRESTERS**  
**H. C. D. Combined Carbon and Fuse Lightning Arrester**

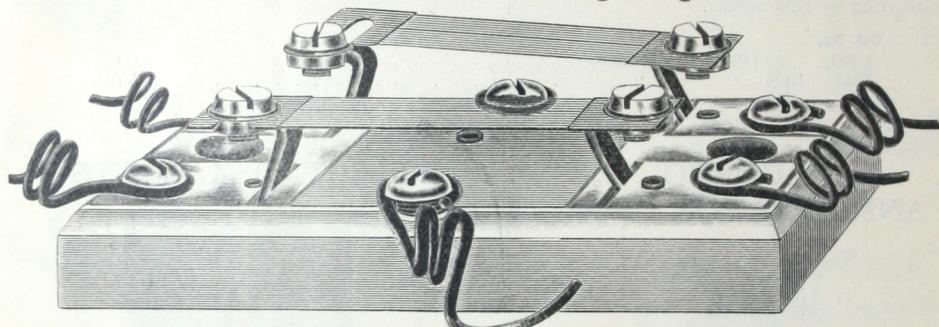


Affords perfect protection to Telephones and Switch-Boards.

Cat. No.  
1250. Each,

PRICE  
\$1 00

**Double Pole Combined Fuse and Lightning Arrester**



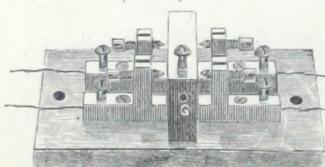
Cat. No.  
1251. Each,  
1252. Fuses, each,

PRICES  
\$ 60  
5

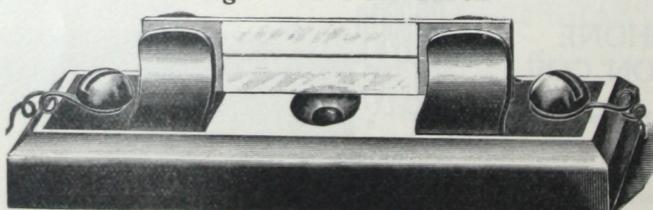
**Lightning Arrester**

**For 1, 2 or 3 Wires**

Cat. No.	PRICES
1253. 1 Wire, each,	\$ .50
1254. 2 " " "	75
1255. 3 " " "	1 00



**Single Pole Fuse Block**



Cat. No.  
1256. Each,  
1257. Fuses, each,

PRICES  
\$ .25  
5

**For other Lightning Arresters, see Telegraph Material**

## OKONITE AND MANSON TAPES

These tapes for which we are exclusive agents are manufactured by the Okonite Co., Lt'd.

### The Manson Tape



### Okonite Tape



The foundation for our Manson Tape is a heavy cloth fabric having a peculiar weave, and made solely for our use. This cloth is first thoroughly saturated with an insulating and preservative compound, and afterward served with an adhesive dressing, the latter resisting the severest climatic changes, as well as preventing corrosion, oxidization or unwrapping.

Manson Tape is made in *Black* and *White*. When ordering please be careful to state which color is required.

#### WE CLAIM:

That it is the best cloth tape in the market.  
That it will not oxidize the wire.  
That it has no superior.

That the price is as low as many inferior tapes now being offered in the market.

It is a first-class article in every respect. Put up in  $\frac{3}{4}$  inch widths, in  $\frac{1}{2}$  pound tin boxes. "Full Weight." Any special width furnished to order.

#### Cat. No.

	PRICES
1258. Manson Tape, per lb., . . . . .	\$1 40
1259. Okonite " " . . . . .	2 00

Subject to discount.

**Write us for Catalogue and Prices on "OKONITE" wires.**

Is of unquestioned superiority, and the demand has steadily increased as the crucial test of time demonstrates its permanent value. It has proved all we claimed for it, being thoroughly waterproof, and a perfect insulating medium. It is not injured by exposure to weather, and does not deteriorate when submitted to extreme changes in temperature, and is not affected by commercial acids or alkalies, qualities possessed by no other tape in the market.

We make it in any width desired, but keep in stock  $\frac{1}{2}$  and  $\frac{3}{4}$  inch only.

Put up in packages of  $\frac{1}{2}$  pound "Full Weight," with our trade mark plainly stamped upon each.

Beware of imitations. None genuine unless put up as above described. Made in *Black* only.

## WIRES AND CABLES

Okonite Wires and Cables have the Endorsement of the Best Electrical Authorities in the World.



The Standard for Rubber Insulation, Awarded Medals Paris Exposition, 1889. World's Fair Exposition, 1893.

Our office is the authorized Philadelphia office of the Okonite Co. L't'd, and we are the exclusive agents for the sale of their Wires, Cables and Tapes.

WRITE US FOR SEPARATE CATALOGUE AND PRICES

**“O.K.” WEATHERPROOF, FIRE AND WEATHERPROOF, AND UNDERWRITER'S WIRES.**

Prices upon application.



Opposite we give the approximate weights of Triple Braid “O. K.” Weatherproof Wire:

Size B. & S. Gauge.	Feet Per Lb.	Lbs. per 1000 ft.	Lbs. per Mile.
0000	1 $\frac{3}{8}$	730	3,840
000	1 $\frac{1}{8}$	588	3,106
00	2 $\frac{1}{8}$	476	2,515
0	2 $\frac{5}{8}$	385	2,030
1	3 $\frac{1}{4}$	308	1,625
2	4	250	1,320
3	5	200	1,056
4	6 $\frac{1}{8}$	164	865
5	7 $\frac{1}{2}$	133	705
6	9	111	587
8	14	72	377
10	19 $\frac{1}{2}$	51	270
12	30	33	175
14	40	25	132
16	65	15	81
18	90	11	58

**Annunciator Wires**

No.	B. & S. Gauge, Approximate Weight,	Per Lb.
12.	“	\$ .33
14.	“	33
16.	“	34
18.	“	34
20.	“	36

Furnished in the following colors: Red, Red and White, Blue, Blue and White, Green, Green and White, Brown, White and Yellow.

**“O. K.” Damp Proof Office Wires**

No.	B. & S. Gauge, Approximate Weight, 32 feet per pound,	Per Lb.
12.	“	\$ .34
14.	“	34
16.	“	36
18.	“	36

Double Conductor Office Wire (two wires under one covering) same prices as office wire. Colors the same as annunciator wires.

**Gas Fixture Wires**

No.	B. & S. Gauge,	Per Lb.
22.	“	\$ .90

Furnished in White, Brown or Yellow.

**Weatherproof Telephone Wire, Twisted Pairs**

No.	B. & S. Gauge, 2 conductors, twisted,	Per Lb.
18.	“	\$ .35

**Push Button Cord, Twisted**

Two conductors each 16 No. 33 wires, with lateral cotton threads and silk wrap, twisted together with a third strand of the same but not containing the wires. Made in green, red or blue, . . . . . \$ .35  
Can be furnished with three or more conductors. Price, 13 $\frac{1}{2}$ c. per yard per conductor.

**BATTERY CORD****Double Silk Tinsel**

Two conductors, 24 threads gilt tinsel, with silk braid twisted together, furnished in green or red. Price, . . . . . \$ .32

Per Yd.

**TELEPHONE CORDS—See Telephones****INCANDESCENT LAMP CORD**

Conductor.	Equal in Capacity to	PRICE PER YARD	
		Silk Covered	Cotton Covered
60 No. 30 Wires	No. 12 B. & S.	40 cents	32 cents
40 " 30 "	" 14 "	29 "	21 "
25 " 30 "	" 16 "	19 "	12 "
16 " 30 "	" 18 "	16 "	9 "
10 " 30 "	" 20 "	12 "	7 "
14 " 34 "	" 22 "	12 "	7 "

**HARD AND SOFT DRAWN BARE COPPER WIRE**

No. B. & S. Gauge	Price per Pound	Pounds per Mile	No. B. & S. Gauge	Price per Pound	Pounds per Mile
0	\$ .28	1688	19	\$ .33	20.7
1	.28	1335	20	.33	16.4
2	.28	1064	21	.34	13
3	.28	838	22	.35	10.2
4	.28	665	23	.36	8.2
5	.28	529	24	.38	6.5
6	.28	419	25	.40	5.1
7	.28	331	26	.43	4
8	.28	262	27	.46	3.2
9	.28	208	28	.51	2.5
10	.28	166	29	.54	2
11	.28 1/2	132	30	.62	1.6
12	.28 1/2	105	31	.67	1.27
13	.28 1/2	83	32	.73	1.02
14	.28 1/2	65	33	.82	.81
15	.28 1/2	52	34	.95	.63
16	.28 1/2	42	35	1 .30	.5
17	.32	32	36	1 .50	.4
18	.32	25.6			

**GALVANIZED IRON TELEPHONE AND TELEGRAPH WIRES**

B. W. G. Gauge	PRICE PER POUND		Size Coils	Pounds per Mile
	Best Net Prices	Ex. Best Net Prices		
No. 6	\$ 07 1/2	\$ .08	1/3 mile	573
" 7	07 1/2	.08	1/2 "	450
" 8	07 1/2	.08	1/2 "	378
" 9	07 1/2	.08	1/2 "	305
" 10	08 1/2	.09	1/2 "	250
" 11	08 1/2	.09	1/2 "	200
" 12	09 1/2	.10	1/2 "	165
" 14	11 1/2	.12	1/2 "	96
" 16	14 1/2	.15	1/2 "	59

## MAGNET WIRES

## Price List

Nos. B. & S. Gauge	COTTON		SILK	
	Single	Double	Single	Double
16	...	...	\$1.12	\$1.53
17	...	...	1.12	1.53
18	...	...	1.15	1.57
19			1.15	1.57
20	\$ 68	\$ 74	1.18	1.61
21	70	88	1.20	1.63
22	76	95	1.30	1.76
23	83	1.05	1.42	1.93
24	90	1.14	1.56	2.13
25	1.00	1.27	1.81	2.48
26	1.10	1.38	2.10	2.88
27	1.25	1.57	2.25	3.07
28	1.35	1.69	2.38	3.23
29	1.50	1.89	2.75	3.76
30	1.65	2.07	2.95	4.02
31	1.80	2.23	3.25	4.40
32	1.95	2.28	3.45	4.53
33	2.40	2.85	3.90	5.10
34	2.85	3.42	4.10	5.30
35	3.25	3.88	5.85	7.78
36	4.37	4.93	7.00	8.88
37	6.75	7.25	11.00	13.63
38	9.00	9.50	13.00	14.50
39	11.00	12.00	15.00	18.00
40	13.00	15.00	20.00	23.00

## Cotton Covered

Nos. B. & S. Gauge	Single Wound	Double Wound
0000 to 0	33 cts. per lb.	36 cts. per lb.
1 to 4	33 "	36 "
5 and 6	34 "	37 "
7 and 8	37 "	40 "
9 and 10	38 "	41 "
11 and 12	40 "	42 "
13 and 14	42 "	46 "
15 and 16	44 "	48 "
17 and 18	45 "	49 "
19	46 "	50 "

## Bare German Silver Resistance Wire

## American or Brown &amp; Sharpe's Gauge

Nos. 16 and coarser.	17 and 18	19 and 20	21
Per lb.	78c.	80c.	83c.
Nos. 22	23	24	25
Per lb.	98c.	\$1.03	\$1.08
Nos. 29	30	31	32
Per lb.	\$1.55	\$1.75	\$1.95
Nos. 35	36	37	38
Per lb.	\$3.65	\$6.50	\$11.50

19 and 20      21      25      27      28

\$1.08      \$1.08      \$1.14      \$1.25      \$1.40

\$2.35      \$2.60      \$2.95

\$18.00      \$25.00      \$30.00

## BATTERY CHEMICALS

Cat. No.	PRICE
1261. Sal-ammoniac, Best Imported Brand, Absolutely White and free from Moisture, per lb., . . .	\$ 15
1262. Blue Vitriol, per lb., . . . . .	10

Prices on Chemicals subject to change

## German Silver Standard Resistance Wire

## Wound with Cotton or Silk. American or Brown &amp; Sharpe's Gauge

No.	COTTON		SILK	
	Single	Double	Single	Double
16	\$1.40	\$1.70	\$1.85	\$2.38
17	1.40	1.70	1.85	2.38
18	1.40	1.70	1.85	2.38
19	1.40	1.70	1.85	2.38
20	1.42	1.74	1.88	2.43
21	1.44	1.75	1.93	2.48
22	1.52	1.83	2.06	2.64
23	1.62	1.98	2.21	2.87
24	1.71	2.09	2.37	3.08
25	1.84	2.26	2.65	3.48
26	2.05	2.48	3.02	3.93
27	2.25	2.73	3.23	4.20
28	2.45	2.98	3.42	4.43
29	2.60	3.13	3.85	5.00
30	2.84	3.38	4.14	5.33
31	3.09	3.66	4.52	5.81
32	3.59	4.21	4.94	6.23
33	3.96	4.64	5.46	6.89
34	4.61	5.44	5.84	7.29
35	5.01	5.69	7.52	9.45
36	8.09	8.88	10.00	11.75
37	13.00	13.75	18.50	22.00
38	24.00	27.00	28.00	33.00
39	27.00	30.00	30.00	40.00
40	30.00	33.00	45.00	50.00

## Light Weight Lead Cables

## For House Work in Plaster, Damp Places, Etc.

No. of Conductors	PRICE PER FOOT		
	No. 14, B. & S.	No. 16, B. & S.	No. 18, B. & S.
2	11 cts.	9 cts.	7.5 cts.
3	15 "	12 "	11 "
4	18 "	15 "	13 "
5	23 "	19 "	16 "
6	25 "	21 "	18 "
7	26 "	22 "	19 "
8	27 "	23 "	20 "
10	38 "	25 "	22 "

Cat. No.	PRICE
1263. Bi-Chromate of Potash, per lb.,	\$ .25
1264. Bi-Sulphate of Mercury, per oz.,	10
1265. Mercury, per lb.,	.90
1266. Sulphate of Zinc, per lb.,	15

## ELECTRICAL BOOKS

Cat. No.			LIST	POSTAGE
1267.	Trevert's Dynamos and Electric Motors, . . . . .		\$ 50	3c.
1268.	" Everybody's Hand-Book of Electricity, . . . . .	Paper,	25	3c.
1269.	" " " " "	Cloth,	50	4c.
1270.	" How to Make Electric Batteries . . . . .	Paper,	25	1c.
1271.	" How to Make a Dynamo, . . . . .	"	10	1c.
1272.	" The New Experimental Electricity, . . . . .	Cloth,	1 00	6c.
1273.	" Electro Plating, . . . . .	"	50	2c.
1274.	" Electricity and its Recent Applications, . . . . .	"	2 00	13c.
1275.	" Armature and Field Magnet Winding, . . . . .	"	1 50	5c.
1276.	" Electric Railway Engineering, . . . . .	"	2 00	10c.
1277.	" How to Make and Use Induction Coils, . . . . .	"	50	2c.
1278.	" Electric Bell Fitting and Electric Gas Lighting, Hand-Book, . . . . .	"	50	2c.
1279.	" Electrical Measurements for Amateurs, . . . . .	"	1 00	5c.
1280.	" How to Build Dynamo-Electric Machinery, . . . . .	"	2 50	17c.
1281.	" Electricity for Students . . . . .	"	1 00	6c.
1282.	" How to Make an Electric Motor, . . . . .	Paper,	10	1c.
1283.	Randall's Practical Treatise on the Incandescent Lamp, . . . . .	Cloth,	50	2c.
1284.	Prindle's Electric Railway of To-day, . . . . .	Paper,	50	2c.
1285.	Conner's Treatise on Electro-Magnetism, . . . . .	Cloth,	50	2c.
1286.	Whipple's Electric Railway, . . . . .	Paper,	1 00	7c.
1287.	Warwick's The Storage Battery. Embracing its Construction, Maintenance and the Installation of Plants, . . . . .	Cloth,	1 50	7c.
1288.	Moore's How to Make and Run a Gas Engine, . . . . .	"	50	3c.
1289.	Elihu Thomson's Popular Lecture on Light, . . . . .	Paper,	20	1c.
1290.	" " What is Electricity, . . . . .	"	25	2c.
1291.	Parkhurst's Electric Motor Construction for Amateurs, . . . . .	Cloth,	1 00	5c.
1292.	Bubier's Questions and Answers about Electricity, . . . . .	"	50	3c.
1293.	" Practical Hand-Book of Photography for Amateurs, . . . . .	"	50	2c.
1294.	Haskin's Transformers. Their Theory, Construction and Applications Simplified, . . . . .	"	1 25	6c.
1295.	Watson's Wiring Hand-Book, . . . . .	"	75	2c.
1296.	" How to Make a One Horse Power Motor or Dynamo, . . . . .	"	50	2c.
1297.	" How to Make a $\frac{1}{4}$ Horse Power Motor or Dynamo, . . . . .	"	50	2c.
1298.	" How to Make a $\frac{1}{2}$ Horse Power Motor or Dynamo, . . . . .	"	50	2c.
1299.	" How to Make an Alternating Current Dynamo or Motor, . . . . .	"	50	2c.
1300.	" How to Make a 50-Light Dynamo, . . . . .	"	50	2c.
1301.	Morrow and Reid's Arithmetic of Magnetism and Electricity, . . . . .	"	1 00	5c.
1302.	Cary's How to Make and Use a Telephone, . . . . .	"	1 00	5c.
1303.	How to Make a Wimshurst Electric Machine with Experiments, . . . . .	Paper,	10	1c.
1304.	Bottone's Electric Bells and All About Them, . . . . .	Cloth,	50	6c.
1305.	" Electro-Motors, . . . . .	"	75	6c.
1306.	" Electrical Instrument Making for Amateurs, . . . . .	"	50	6c.
1307.	Croft's How to Make a Dynamo, . . . . .	"	75	5c.



# ... INDEX ...

## A

	PAGE
Acorns, . . . . .	55
Alarm, Burglar, . . . . .	28
" Boxes, Fire, . . . . .	24
Alcohol Torches, . . . . .	64
Annunciators:	
Style A and B, . . . . .	26
Hotel Style, No. 1 and No. 3, . . . . .	27
Annunciator Movement, . . . . .	25
" Drop, Magneto, . . . . .	81
Arresters, Lightning, . . . . .	69 and 82

## B

### Batteries and Parts:

Axo, No. 1 and No. 2, . . . . .	4
Carbon Cylinder, Novelty, . . . . .	3
Crowfoot, 5 x 7 and 6 x 8, . . . . .	5
Dry, O. K. Type B, S, C, E, . . . . .	6
" " " D, . . . . .	7
" Mesco, . . . . .	7
" Himmer, . . . . .	7
Eagle, . . . . .	5
Edison-Lelande,	
" Type J, Q, X, . . . . .	8
" " R, S, . . . . .	9
" " W, . . . . .	10
" " Z, Y, . . . . .	11
Fuller, Standard, . . . . .	5
Grenet, Novelty, . . . . .	3
" French, . . . . .	3
Gonda, . . . . .	4
Leclanche, . . . . .	3
O. K., Wet, . . . . .	12
Samson, Nos. 1 and 2, . . . . .	4
Battery Clamps, . . . . .	15
" Connectors, . . . . .	15
" Cut-Out, . . . . .	52
" Coppers, . . . . .	14
" Syringe, . . . . .	11
" Switches, Wood, . . . . .	43
" " Hard Rubber, . . . . .	43
" Parts, Edison-Lelande, . . . . .	12
Bases—Key, . . . . .	51
Balls, Glass, for Chain Pulls, . . . . .	55
Bead Chain, . . . . .	55
Bells—American District, . . . . .	24
" Extension, . . . . .	76
" Electro Mechanical, . . . . .	21
" Eco, . . . . .	22

	PAGE
Bells—Duplex, Vibrating, . . . . .	20
" Indicating, 2 Point, . . . . .	18
" Style A, Iron Frame, . . . . .	17
" " E, Wood Box, . . . . .	16
" " F, Skeleton, . . . . .	19
" " H, Iron Frame, . . . . .	18
" " K, Wood Box, . . . . .	16
" " L, Iron Frame, . . . . .	17
" " M, " " . . . . .	18
" " S, " " . . . . .	17
" Vigilant, . . . . .	20
Bell Pull Attachment, . . . . .	40
Binding Posts, . . . . .	57
Bit Wrench, . . . . .	62
Bits, Bell Hangers', . . . . .	62
Books, Electrical, . . . . .	87
Braces, Ratchet, . . . . .	62
Buzzers, Improved Iron Box, . . . . .	22
" Lungen, . . . . .	22
" Novelty, . . . . .	22
Burglar Alarms, . . . . .	28
Bushings, . . . . .	52
Burglar Alarm Switch, . . . . .	43
Burners:	
" Automatic, Boston, Plain, . . . . .	46
" " Candle, . . . . .	47
" " Gasoline, . . . . .	46
" " Holtzer, Plain, . . . . .	46
" " Outside, . . . . .	46
" Ratchet, Candle, . . . . .	47
" " Boston, . . . . .	48
" " Billiard, . . . . .	48
" " Clough-Tip, . . . . .	49
" " Jypco, Parke, . . . . .	48
" " Number 17, . . . . .	48
" " Maxim-Tip, . . . . .	49
" Frictional, . . . . .	53-54
" Bushing, Insulated, . . . . .	52
C	
Carbon Clamps, . . . . .	15
" Connectors, . . . . .	15
Candle Burners, . . . . .	47
Call Boxes, . . . . .	24
Chemicals, . . . . .	86
Chain, Bead, . . . . .	55
" Pulls, . . . . .	55
Circuit Closing Attachment for Bell Pulls, . . . . .	40
" " " Magneto, . . . . .	81
Cleats, Wood, . . . . .	52

## INDEX—Continued

	PAGE	PAGE	
Coppers, Battery, . . . . .	14	K	
Connectors, Battery, . . . . .	15	PAGE	
" Wire, . . . . .	56	Keys, Strap or Signal, . . . . .	45
" Jump, . . . . .	56	" Lighting, Style A, . . . . .	51
Continuous Ringer, . . . . .	23	" " " D, . . . . .	51
Coils, Spark, . . . . .	50	" " " F, . . . . .	51
" Rhumkorff, . . . . .	55	" Telegraph, . . . . .	66, 67, 68
" Telephone Induction, . . . . .	81	Knives, Electrician's, . . . . .	63
Cord, Battery, . . . . .	84-85	L	
" Incandescent, . . . . .	85	Lightning Arresters, . . . . .	69 and 82
Cut-Outs, Fuse, . . . . .	82	M	
" " Battery, . . . . .	52	Magnets, Horse-Shoe, . . . . .	7
Cups and Pins, . . . . .	55	" Electro, . . . . .	81
<b>D</b>		Magneto Bells, Bridging, . . . . .	79
Door Opener, . . . . .	28	" " Hand, . . . . .	79, 80
" Springs, . . . . .	41	" " Pony, . . . . .	78
" Trip, . . . . .	42	" " Standard, . . . . .	78
Drop, Automatic, . . . . .	23	" " Testing, . . . . .	78
" Novelty, Automatic, . . . . .	45	" Bell Parts, . . . . .	80
Dynamo Electric Gas Lighting Torch, . . . . .	54	" Circuit Closing Attach't, . . . . .	81
<b>E</b>		" Annunciator Drop, . . . . .	81
Electric Door Opener, . . . . .	28	Matting, . . . . .	42
" Matting, . . . . .	42	Mouth-Pieces, Open, . . . . .	60
Electro Mechanical Gong, . . . . .	21	" " Covered, . . . . .	60
" Magnets, . . . . .	81	<b>N</b>	
Extension Bells, . . . . .	76	Name Plates, . . . . .	39
<b>F</b>		Novelty Automatic Drop, . . . . .	45
Fire Alarm Box, . . . . .	24	<b>P</b>	
Floor Matting, . . . . .	42	Pipes, for Battery Syringe, . . . . .	11
Frictional Machines, . . . . .	53	Pliers, . . . . .	61
" Apparatus, . . . . .	53-54	Plates, Name, . . . . .	39
Funnels, Gutta-Percha, . . . . .	11	Pole Changing Switches, . . . . .	44
" Glass, . . . . .	11	Push Buttons, Cast, (not screw cap), . . . . .	31-35
<b>G</b>		" " (screw cap), . . . . .	36
Gauges, Wire, . . . . .	65	" Desk, . . . . .	39
" Warner, . . . . .	65	" " Floor, Plain, . . . . .	38
Gas Lighting Torch, . . . . .	54	" " " Combination, . . . . .	38
Galvanometers, . . . . .	65	" " Hard Rubber, . . . . .	37
Gasoline Torches, . . . . .	64	" " Midget, . . . . .	39
Generators—Magneto, . . . . .	78, 79, 80	" " " Jr., . . . . .	39
Gongs—Electro, . . . . .	19, 20, 21	" " Style C, . . . . .	39
" Only, . . . . .	23	" Mite, . . . . .	39
<b>H</b>		" Novelty, Plain, . . . . .	40
Horse-Shoe Magnets, . . . . .	7	" Pear, . . . . .	38
Hydrometers, . . . . .	11	" Small Bronze, . . . . .	37 and 40
<b>I</b>		" Table Clamp, . . . . .	37
Igniter, Gas, . . . . .	54	" Wood, . . . . .	37
Induction Coils, Rhumkorff, . . . . .	55	<b>R</b>	
" " Telephone, . . . . .	81	Ratchet Brace, . . . . .	62
Insulating Bushing, . . . . .	52	Receivers, Telephone, . . . . .	72, 73
		Relays, Main Line, . . . . .	67
		" Pony, . . . . .	67
		Rhumkorff Coils, . . . . .	55

## INDEX—Continued

### S

	PAGE
Sal-Ammoniac, . . . . .	86
Scissors—Electricians', . . . . .	61
Screw Drivers, . . . . .	62, 63
Signal or Strap Key, . . . . .	45
Sounders, Telegraph, . . . . .	67, 68
Spark Coils, . . . . .	50
Springs, Door, . . . . .	41
" Transom, . . . . .	41
" Window, . . . . .	42
Speaking Tube and Supplies, . . . . .	58-60
Staples, . . . . .	52
" Driver, . . . . .	58
Switches, Battery, Wood, . . . . .	43
" " Hard Rubber, . . . . .	43, 44
" Burglar Alarm, . . . . .	43
" Frictional Lighting, . . . . .	53
" Metal, Battery, . . . . .	44
" Pole Changing, . . . . .	44
" Telephone Lever, . . . . .	75
Switch-Boards, Telephone, . . . . .	77

### T

Tacks, . . . . .	52
Tape, . . . . .	83
Thermostat, Thermometer, . . . . .	50
Telegraph Instruments, . . . . .	66, 67, 68
Telephone " . . . . .	70 to 77
" Switches, . . . . .	75
" Transmitter, . . . . .	70 and 77
" Receivers, . . . . .	72-77
" Cords, . . . . .	74
" Switch-Boards, . . . . .	77
" Induction Coils, . . . . .	81
Tinsel Cord, . . . . .	85
Torches, Vulcan, Gasoline, . . . . .	64
" White, " . . . . .	64
" Victor, Alcohol, . . . . .	64
" Galloway, " . . . . .	64
Trip, Door, . . . . .	42
Transom Springs, . . . . .	41
Tube, Tin, . . . . .	59
" Terminals, Flexible, . . . . .	59
" Holders, . . . . .	58
Tubing, Flexible, . . . . .	58

### W

	PAGE
Warner Gauge, . . . . .	65
Welsbach Attachment for Electric Gas Lighter, . . . . .	54
Whistles, . . . . .	60
Wire Connectors, . . . . .	56
" Snips, . . . . .	61
" Scraper, . . . . .	63
" Annunciator, . . . . .	84
" Battery Cord, . . . . .	85
" Copper, Bare, . . . . .	85
" German Silver, . . . . .	86
" Gas Fixture, . . . . .	84
" Iron, Galvanized, . . . . .	85
" Lamp Cord, Incandescent, . . . . .	85
" Lead, . . . . .	86
" Magnet, . . . . .	86
" Okonite, . . . . .	84
" "O. K." Electric Light, . . . . .	84
" Office, . . . . .	84
" Push Button, . . . . .	84
Window Springs, . . . . .	42
Wrench, Bit, . . . . .	62
Wood Cleats, . . . . .	52

### Y

Yale Lock, Burglar Alarm Switch, . . . . .	43
--	----

### Z

Zincs, Crowfoot, . . . . .	13
" Callaud Star, . . . . .	13
" Daniel, . . . . .	13
" Fuller, . . . . .	14
" Gamewell, Fire Alarm, . . . . .	13
" Lockwood, . . . . .	13
" Rod, . . . . .	13
" Samson, Nos. 1 and 2, . . . . .	14
" Wheel, . . . . .	14
" Wire Arm Fire Alarm, . . . . .	14